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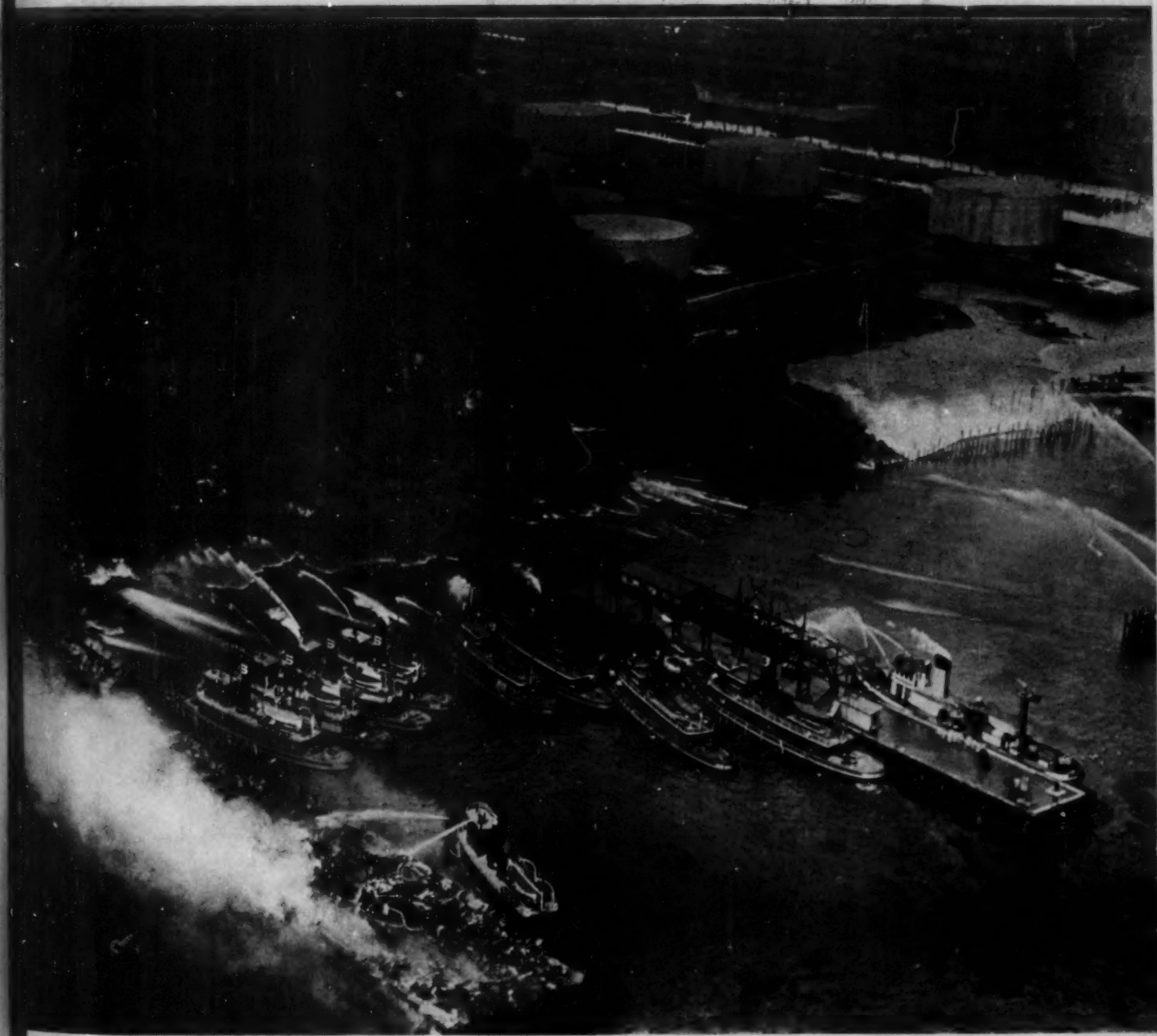
The Journal of the Fire Protection Profession Since 1877

Vol. 86, No. 2 FEBRUARY, 1933 Member A.B.C.–A.B.P.



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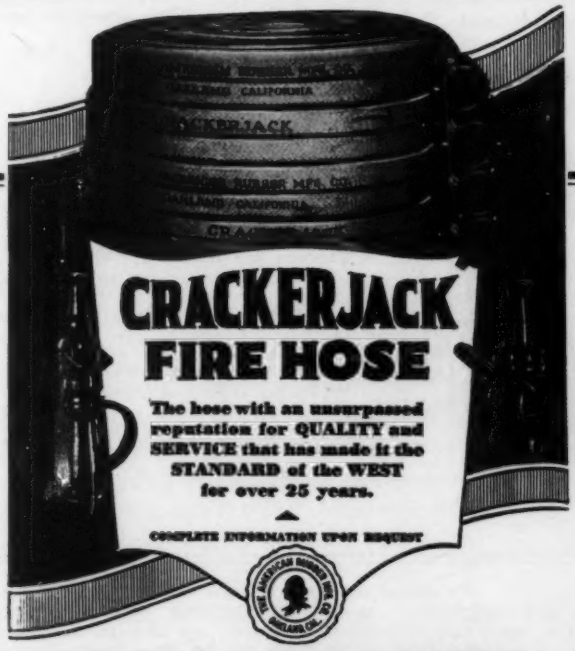
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The Journal of the Fire Protection Profession Since 1877

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Wake 'em up!

"PUBLIC sentiment is everything," said Abraham Lincoln. "With public sentiment nothing can fail; without it nothing can succeed. Consequently, he who moulds public sentiment goes deeper than he who enacts statutes or pronounces decisions."

● There is nothing more important to a city than an efficient fire department, yet why is it that this is seemingly being overlooked in all the clamor for reduced budgets? Simply because very little if anything is being done to "sell" the people and arouse them to the vital need of adequate fire protection.

● Every fire chief who is being forced to take dangerous cuts should jump in with both feet and use every means at his command to stir up public sentiment for the needs of his department. The misguided citizen has to be awakened for his own good.

The Publishers

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MEMBER Audit Bureau of Circulations Associated Business Papers

Published the tenth of each month by
CASE - SHEPPERD - MANN PUBLISHING CORPORATION
Also publishers of "Water Works Engineering," and "Municipal Sanitation"
General Offices—24 West 40th St., New York

SUBSCRIPTION PRICE
U. S., $2 a year; Canada, $2.50
Foreign, $3; Single copies, 25c

KARL M. MANN, President
I. HERBERT CASE, Vice-Pres. and General Manager
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CHICAGO: 6 N. Michigan Ave.—W. S. CLEVENGER, L. M. ROCHE; SAN FRANCISCO: 1045 Sansome St.—C. H. WOOLLEY, W. V. WOEHLER.

Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under the Act of March 3, 1879.

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Supt. of Fire Alarms,
Columbus, Georgia.

Dear Mr. Tillman:-

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FIRE ENGINEERING

The Journal of the Fire Protection Profession

Volume 86 FEBRUARY, 1933 Number 2

With the Editor

"Millions for defense, but not one cent for tribute"
—C. C. Pinckney, U. S. Minister to France, 1796 (answering French minister's demand for money)

Millions for defense . . . ? The courageous stand taken by Ambassador Pinckney before representatives of France in the Eighteenth Century was just what one would expect from a representative of this country back in those days of sturdy Americanism.

Some people would even go as far as to assert that a typical representative of our people today would show like courage in a similar situation. We doubt it, particularly if the actions of municipal officials in many of our largest cities during the past year can be taken as a criterion.

When faced with the choice of maintaining the strength of the Fire Department for defense against fire or exposing the property owners to increasing fire losses and increases in insurance rates, what was their decision? Why, just the opposite of that sterling American, Pinckney: more millions in tribute to fire loss and in higher insurance premiums, but reduced appropriations for defense.

It takes backbone to stand by one's guns when the public is shouting for lower taxes; it takes courage to assert one's convictions and to fight against destroying those things which are fundamentally indispensable. It is far easier to follow the cowardly course in giving the public what it demands, even though it is not the best thing for the public.

Apparently too many of our present day officials are prone to interpret the term "public servant" as one who caters to the least little whim of, and who should fear expressing any suggestion or doing any deed which might prove displeasing to, his master. A public servant in the true sense of the word is one who serves best the interests of his employer; one who knows better than the public what is best for it.

In these times of high governmental costs, and when there is real need for reducing the burden of high taxes, there are other ways of economizing than through crippling one of the most necessary branches of municipal service. Street paving, park development, new city buildings, and similar activities can be suspended without subjecting the city to any hazard such as would be created by weakening the fire-fighting facilities.

If it were more economical for all to carry insurance than to maintain organized fire protection, there would have been no fire departments in the first place. Even the insurance companies early recognized the need of fire protection, for they, on their own initiative, formed the first fire fighting department in New York City.

Surely the need for fire protection is as great today as ever. And efficient and economical fire protection can only be obtained through well equipped and well manned departments.

Under these conditions there is every argument to reinforce those who have courage enough to battle against unwarranted reduction in fire forces and equipment.

City officials could well take a cue from Pinckney's stand that there be "millions for defense, but not one cent for tribute."

Fred. Sheppard

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A Simple Explanation of the Construction and Operation of

Fire Hydrants

By N. N. WOLPERT,
Assistant Editor,
Fire Engineering

WITH a shriek that is thrilling, the fire apparatus goes rushing down the street. It weaves in and out through the traffic, halts cross bound vehicles, and causes the passerby to pause and wonder where the fire is. On the apparatus, however, the men pay little attention to the commotion they cause. They have faith in the equipment that has been provided for their use, they know that the man guiding the apparatus has been carefully trained, and from long experience they have reason to believe that they will find an ample supply of water near enough to the fire to be of material assistance.

Water for the use of fire streams is chiefly obtained from the hydrants located near street intersections or the middle of blocks. They are installed by the Water Department or Water Company primarily for use by the Fire Department. For this fire protection service the city usually pays an annual fee for each hydrant, termed the hydrant rental charge.

If the hydrants which have been installed are not maintained in good condition or are abused so that they become damaged, there is danger that some day a fire will get away that should, by every reasonable allowance, have been confined to its point of inception. Firemen have become so accustomed to good hydrant service, that many fail to appreciate what has been done to keep the hydrants in good condition, and the things that they as firemen must do to prolong the life of the hydrant.

They do not realize that they as the future officers must know the construction of each type of hydrant so they can make intelligent recommendations to the Water Department concerning the installation of new hydrants. While it is the Water Department that installs and maintains the hydrants, it is the Fire Department that is given the privilege of using the hydrants. Members of the Fire Department see the hydrant in actual service and they are qualified by experience in the field to make suggestions concerning the type hydrant to be installed in future installations.

Understanding of Construction

To properly appreciate fire hydrants, it is necessary to have quite a clear conception of their construction and the steps that must be followed to properly install them.

In general, there are two types of hydrants, the post type which rises above the surface of the street and the flush type which is set in a manhole protected by an iron cover. This type is installed in the warmer climates or in the larger cities. The post type is the one that is commonly installed.

Most high value mercantile and manufacturing districts will require at least one hydrant to each 40,000 square feet of area and ordinarily well built up residential areas will require one hydrant to each 100,000 to 120,000 square feet of area. It is better practice to install a number of hydrants than to be forced to use long hose lines. In thickly built mercantile sections, hydrants should be spaced about 200 feet apart and not more than 500 or 600 feet. Adjacent hydrants should be located on opposite sides of the street so the danger of having apparatus on the wrong side of the street will be eliminated.

In setting hydrants, a valve should be located between the main and hydrant so repairs can be made to the hydrant without shutting off the main supply valve. If the hydrant is set too close to the building line there is danger that a falling wall may cover the hydrant or snap it off and weaken the pressure of other hydrants in that group. Hydrants should be set back from the curb line that trucks and automobiles in backing up to the curb, will not break the hydrants.

Drip Valves

Hydrants are provided with drip valves. After the hydrant has been used, whatever water is in the barrel will drain out and leave the barrel in a dry condition. This is important in districts where freezing temperatures are common during the winter months, for a frozen hydrant may mean disastrous delay.

In installing the hydrant, provision must be made so that the water will flow out through the drip valve. It is necessary that this water drain away from the hydrant and percolate through the soil. To insure drainage and to prevent the drip hole from becoming clogged, broken stone and other coarse material is filled in around the base of the hydrant. Where the base of the hydrant rests in clay, a 2-inch pipe is driven through the clay stratum until a layer of sand is reached. This will guide the drip water from the hydrant to the sand through which it will pass rapidly.

If there should be a sewer near the hydrant, a 2-inch cast iron drain line can be run from a point near the drain valve to a sewer inlet.

Whatever method is employed, one must be certain that the hydrant barrel will be dry when not in use.

As a precautionary measure, hydrants are inspected in the spring and then again in the fall before cold weather arrives. Should a hydrant be found in the winter having a defective drip valve or one in which ground water has entered, either salt or denatured alcohol is placed in the barrel to lower the freezing point of the water. Salt induces a corrosive action.

Calcium chloride may be used instead of salt. Water containing 1 per cent calcium chloride freezes at 31.1° F.; 5 per cent calcium chloride, 27.68° F.; 10 per cent, 22.38° F.; 15 per cent, 12.2° F.; 18 per cent 4.64° F.; 19 per cent, 1.76° F.; 20 per cent, -1.48° F.; 21 per cent, -4.9° F.; 22 per cent, -17.14° F.; 27 per cent, -32.62° F. Following is the quantities of calcium chloride required to make solutions of different freezing points:

Pounds per gal...	3.76	3.36	2.95	2.56	2.18	1.80	1.43
Freezing point F..	-32.6	-19.5	-8.7	Zero	7.5	13.3	18.5

Water with 1 per cent salt by weight freezes at 31.8° F.; 5 per cent, 25.4° F.; 10 per cent, 18.6° F.; 15 per cent, 12.2° F.; 20 per cent, 6.86° F.; 25 per cent, 1° F.

The amount of denatured alcohol required to prevent freezing must be equal in volume to the quantity of water it is to protect. If seepage of water into the hydrant barrel will rise to such a point that there will be four gallons of water in the barrel, two gallons of alcohol must be used.

In some places where intense cold weather is the rule rather than the exception, some of the hydrants are protected by boxes or other coverings around the hydrant which can be removed when the hydrant is to be used.

Many Water Departments require that the Chief notify the water office of any hydrant that is used during the winter months, just as soon as it has been used. The Water Department then sends a man to make an examination to determine if the drip valve operates properly and if hydrant has drained completely. When necessary, temporary repairs are made at once, and if possible, the major repairs are held off until the weather becomes more favorable for outside work.

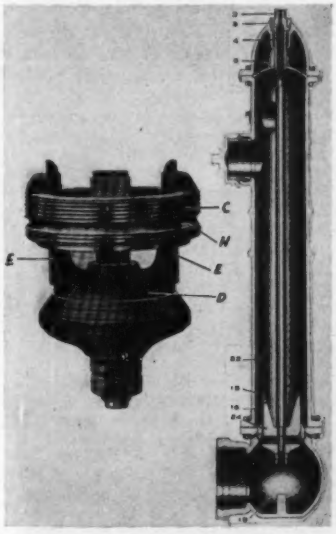
Precautionary Measures

In making the hydrant inspections, it is well to place a composition of heavy cylinder oil and graphite around the opening of the nut and under the collar of the hydrant, after the barrel has been drained. This prevents accumulation of water around the nut and consequent binding when ice is formed.

Where ground water seeps into the barrel, it is necessary to use a hand pump at frequent intervals to drain the hydrant. Trouble caused by roots of trees clogging the drain holes of the hydrants can be checked by clearing away the roots and placing an amount of lime around the base of the hydrant. The lime keeps the roots away.

All of the precautionary measures have to be taken by the Water Department so that the hydrants will always be in proper operating condition. It is the duty of the Fire Department to report any defective hydrants or the illegal use of hydrants.

However, it is well for department officers to train the firemen so they will have a knowledge of the hydrants installed for their use. There are a number of hydrants on the market and in some cities more than one type is installed. For the benefit of the firefighters, a brief description is given of each of the common type fire hydrants.



Showing Construction of Columbian Hydrant and Valve

Columbian Hydrant

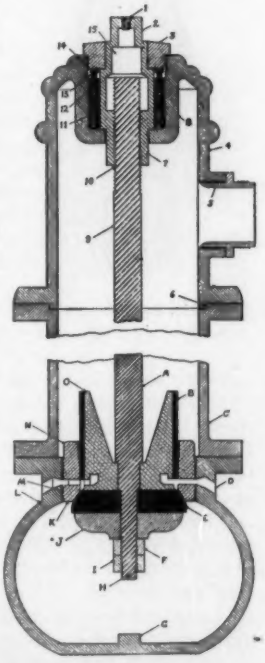
The drain of the Columbian hydrant (Columbia Iron Works, Chattanooga, Tenn.) is an integral part of the main valve. It consists of an outlet from the inside of the hydrant through the seat ring (C), opening into a groove (H) around the outside of the seat ring. The groove leads off the waste water which drains from bottom flange. A leather packing is dovetailed into the guide wings (E) on the upper valve plate (D). This leather covers the drain outlet in the seat ring when the hydrant is open and moves sufficiently to uncover the drain outlet just as the hydrant is closed.

The stuffing box can be repacked from the top of the hydrant without unbolting the hydrant bonnet (6). This is done by unscrewing the hold down nut (3), revolving the stem nut (2) until it is high enough to insert the packing.

All working parts of the hydrant can be removed through the top without disconnecting the hydrant. This is done by unbolting the hydrant bonnet and with the aid of a special socket wrench, unscrewing the seat ring (24). This permits the lifting out of the seat ring, main valve and drip valve.

Crispin Hydrant

The Crispin hydrant (Multiplex Manufacturing Company, Berwick, Pa.) is so designed that the packing ring with its screws is a unit by itself. The bronze packing ring (12) in the head has four adjusting screws (13). After the packing (11) is placed in the hydrant, the ring with its screws is laid on top, and the screws in the ring backed off far enough to produce the proper pressure when the bronze stuffing box nut (3) presses against the heads of the screws. This makes the stuffing box nut always tight against the top of the hydrant. Means are provided for readily adjusting any wear in the packing.



Top and Bottom Sections of Crispin Hydrant

The stem thread (10) receives its lubrication through the reservoir (15) and this is led through a hole in the top after the screw (1) is removed. The stuffing box nut (3) is provided with a left-hand thread (14) so that it will not be loosened when opening the hydrant.

The water pressure in the main keeps the valve (E) in the closed position even though the hydrant may be damaged. The assembly of drain valves (O) main valve leather (E) bottom plate (J) is held firmly in position by the bronze bottom plate nut (F) and the jam nut (I). The lug (G) causes the main valve to stop in the correct open position.

The seat ring (M) is tapered and threaded to guage so that it is interchangeable.

When the hydrant is opened the conical valve at the bottom of the opening is lowered and this closes the drain holes (D). Water rushes into the barrel and out through the hydrant openings. When the hydrant is closed, the conical valve at the bottom is pressed firmly against its seat by the water pressure in the main, and the drip

holes are uncovered. Water in the barrel flows out through the holes and the barrel is left dry.

Eddy Hydrant

The Eddy hydrant (Eddy Valve Company, Waterford, N. Y.) is constructed with a rubber-faced valve that is operated by a valve stem (S). The lower end of this stem is threaded and works in a bronze nut in the hydrant bottom. The rubber face (L) on the bottom of the valve (K) makes a good seat on the seat (J). The valve can be taken off the stem by removing the check nuts (H). The rubber face is so attached that it can be easily removed and replaced.

Cross Section of Eddy Hydrant

The collar of the valve stem revolves and seats on bushing (W) in the center of the valve to make a watertight joint. The stuffing box (M) has a molded packing ring to prevent water from coming up around the stem.

Below the valve is the cylinder piece (U) which holds the rubber face on the valve. This piece enters the valve opening when the hydrant is being closed to gradually close off the flow of water when the face of the valve is some distance from the valve seats. The drip cup (X), located at the side of the valve seat, drains the standpipe through openings in the side of drip cup.

In the drip cup a solid tapering rubber plug or plunger (O) is inserted. This opens and closes the drip by means of the drip rod (P). The lower end of this rod is threaded. On the threaded portion is the rubber plug. By means of lever action, when the hydrant valve is opened, the drip valve is closed and vice versa.

The swivel head (4) of the swivel head hydrant is bolted to the upper flange of the standpipe. The nozzles are located in this head. The bolting of the head is such that the position of the nozzles can be changed forty-five degrees or any multiple of forty-five degrees, and the head bolted in its new position. The drip support is held in a ring which has eight holes corresponding to the dripping of the upper and lower flanges of the swivel head. It is possible to change the position of the swivel head and leave the drip support ring, drip support and drip rod in the original or right position in the hydrant. Should a change in the number of outlets be desired, it is possible to change the head without digging up the hydrant.

(*To be continued*)

Chief Murphy of Piedmont, Cal., Dead

Archibald W. Murphy, fifty-two years old, Chief of the Piedmont, Cal., Fire Department, died recently at his home. He was a native of San Francisco and was a member of the Oakland Fire Department. He became Chief of the Piedmont department in August, 1930. Chief Murphy was a member of the Oakland Veteran Firemen's Association and was Vice-President of the Pacific Coast Fire Chiefs' Association. He is survived by his widow, four sons and three daughters.

NEW YORK'S NEWEST FIRE BOAT COMPLETES FIRST YEAR'S SERVICE

Boat Made 180 Runs and Pumped Over 14 Million Gallons Water at Fires—System Protects Craft from Gasoline Vapor Hazards

By William Jerome Daly

THE gasoline fire boat, John J. Harvey, flagship of the marine fire fighters of New York City, celebrated her first year of active service December 17. Despite skeptics and apprehensive ones, the Harvey did not blow up during the past twelve months. She had one mishap at the Cunard pier fire last May, when a piston shaft tore a rent in the housing of one of her five engines and the sizzling hot oil flashed fire into the bilge. The fire was so quickly extinguished with the CO_2 system that the boat resumed pumping operations within forty minutes.

The Harvey, pumped a total of 14,026,308 gallons of water between December 17, 1931, and the same date in 1932. She had 180 runs, worked 59½ hours on fire duty, traveled 706 miles, used 25,713 gallons of gasoline, 757 gallons of lubricating oil and 20,662 gallons of fuel oil. The cost for repairs, supplies, fuel, oil, etc., during the year was $5,861.13.

At the Cunard Pier fire she delivered 12,289,123 gallons of water. Last Decoration Day she delivered 115,320 gallons during five hours duty; at the Coney Island conflagration last July she pumped in Jamaica Bay to the Coney Island high pressure system to augment it and delivered 1,248,400 gallons.

The boat attains 20 knots an hour, needs no fuel at her berth, no human energy is required to maintain speed, she can operate continuously for 24 hours without refuelling, can supply electric current ashore, is designed to combat ice floes, can be navigated by twin propellers if the rudder fails, can be refuelled while at her berth without going out of service, each of the four pumps has its own separate suction bay, she has twice as many deck turrets as any other fire boat and her gasoline supply in tanks does not invite explosion due to vapors because of the aqua-marine system which supplies water in the tank in an amount equivalent to the gasoline consumed, thereby maintaining at all times a "solid tank" and thus defeating the possibility of the congregation of gases or gasoline vapors.

Only one kind of oil for lubrication is required throughout the vessel. The fact that she is of the gasoline-electric type of simple operation exempts her from inspection by the United States Steamboat Inspection Service. As an auxiliary to high pressure systems ashore, she can and has delivered 16,000 gallons of sea water a minute at 150 pounds pressure.

The Harvey was built by the Todd Shipyards in Brooklyn.

O'Connor, Washington Drillmaster, Dead

As noted in the last issue of FIRE ENGINEERING, Battalion Chief Thomas F. O'Connor, Drill Master of the District of Columbia Fire Department, Washington, D. C., died suddenly on November 20 from heart failure.

He was born February 6, 1872, in Fairfax County, Virginia, and was appointed to the fire service on December 1, 1896, in Washington. He became Assistant Foreman in 1899 and Captain in 1904. He was prompted to battalion chief on September 6, 1918, and was assigned as Drill Master on September 23, 1922. Just prior to this he had completed a course in the Boston Fire Department Drill School.

Chief O'Connor was a member of the Officers' Association of the District of Columbia Fire Department, the City Fire Fighters' Association, the International Association of Fire Chiefs, the New England Association of Fire Chiefs, the Knights of Columbus, and the Elks. He is survived by his wife and two brothers, one of whom, Edward O'Connor, is a Battalion Chief in Washington.

The funeral was held on November 23 with a solem high mass in St. Aloysius Church and interment in the Congressional Cemetery. The honorary pall bearers were Chief George S. Watson, Fire Marshal Calvin G. Lauber, Ex-Fire Marshal Sidney Bieber, Battalion Chief E. R. Pierce, Supt. of Machinery O. E. Fearn, Battalion Chief B. W. Weaver, and Battalion Chief P. J. Sullivan. The active bearers were Captains W. H. Nash, T. S. Jones, and J. B. Lyon, Lt. J. W. Allan, Sergt. C. C. Weitzel, and Private J. W. Holmes. There was an escort of 200 firemen in uniform. As the cortege passed the house of Truck Co. 13 the men and apparatus were drawn up in review and the bells tolled.

HARRY BELKNAP.

Hazards of Fumigants

Concluding installment of paper, from last issue, in which fire-fighters, and more so members of rescue companies, will find a vast amount of authoritative and valuable information.

By C. L. WILLIAMS,
Surgeon,
United State Public Health Service

GAS masks used in cyanide gases must fit closely to the face. This is essential in the presence of a substance that is poisonous in such small amounts. Leaks in the face piece or around the edges cannot be permitted. Most gas masks are made in different sizes, commonly three sizes, so that it is usually necessary for each individual to learn which size fits his face. The No. 2 size fits the average face.

The life of the canister is limited. Those designed for the cyanides will generally protect against the amounts used in fumigation for from one to four hours of steady breathing. When the canister is becoming ineffective, breathing through it becomes much more difficult. After a canister has been used in cyanide, the next time it is used a cyanide smell will be noticed for a few breaths; but this should soon disappear. When one enters the gas a slight odor of cyanide generally comes through. This, too, should cease within two or three minutes. If it persists or gets strong, the mask or the canister is leaking. In the case of cyanogen chloride, determination of leaks is very easy; if sufficient gas to be dangerous comes through, the wearer will be practically blinded by the eye irritation. If he can stand the irritation, then only very small amounts are getting through.

Other Fumigants

There are a number of other substances employed in fumigation, none of which at present, however, are used in this country to the extent that cyanides are used. All that have come into use to date are very much less poisonous than the cyanide gases, but they are used in very much larger amounts.

Sulphur dioxide, generally produced by burning sulphur, either on the premises in iron pots set in pans of water, or in special furnaces from which the gases are led through a large pipe into the space under fumigation, is the gas par excellence in the matter of warning of its presence. In concentrations far below the quickly fatal level it causes severe irritation of the throat, producing a sensation of choking as well as persistent coughing. It is not rapidly fatal like HCN and so persons caught in it have ample time to make their way out. Although eye irritation occurs, it is not blinding. It is the only nearly safe fumigant that we know.

Sulphur fumigation has been almost entirely abandoned in this country, because the gas penetrates very slowly and not very deeply so that its results are unreliable, because it is highly injurious to many foodstuffs, most fabrics, and nearly all metals, and because of the fire hazard due to burning it inside of the space fumigated.

Sulphur is mentioned principally because sometimes an emergency call is made from a house the occupant of which has bought a sulphur candle at a drug store and burned it in a room. The amount of sulphur dioxide produced in such a case is usually much too little to be dangerous. The principal result is that everyone is driven out of the house.

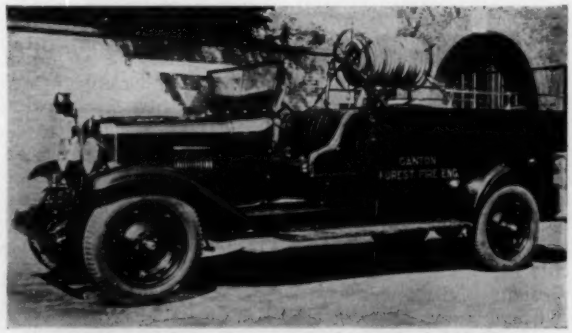
Formaldehyde is an irritant gas, irritating the eyes, nose, and throat. It is not dangerous to human life unless it is in an enormously high concentration and then only after long exposure.

Within the past five years three substances have been developed as fumigants which will probably become quite wide spread in use. These are ethylene dichloride, ethylene oxide, and a mixture of ethylene oxide and carbon dioxide, marketed under the trade name of "Carboxide." The first named, ethylene dichloride, is not greatly used at present; and when used it is generally mixed with carbon tetrachloride to remove the fire hazard. It is for the same purpose that carbon dioxide is mixed with ethylene oxide. Ethylene oxide, however, is also used alone.

These fumigants are much less poisonous than HCN and, hence, must be used in much higher concentration. Their value comes from two properties: They are relatively more poisonous to insects than to warm-blooded animals, including human beings, and they are relatively slow in their action. These properties permit fumigation for the destruction of insects with greatly reduced hazard to human life, They are not nearly so rapid in their action as HCN, permitting more time for those trapped to escape.

From what we know at present, these gases may be entered for short periods, three or five minutes, without serious risk; but if longer stay is necessary, gas masks should be worn. Gas masks containing charcoal in the canisters will protect against them for a time. I am not aware whether special gas masks for them have been as yet developed.

Ethylene dichloride, alone or mixed with carbon tetrachloride, is a liquid at ordinary temperatures and is marketed in steel drums. Ethylene oxide and Carboxide are both gases at room temperatures. The former may



Canton, Mass., Apparatus for Forest Fire Protection

Chief C. King Endicott, of Canton, Mass., and Forest Warden Joseph Powers designed a special apparatus that is being used in the vicinity of Canton for the protection against forest fires. It was exhibited at Newport, R. I., on Forest Fire Day of the New England Fire Chiefs' Convention. The apparatus carries 1,600 feet of 1½-inch hose and is fitted with a 110-gallon water tank; 450 feet 1-inch hose; 10 soda and acid extinguishers; four Indian pump cans, besides shovels and brooms.
HARRY BELKNAP.

be packed under pressure as a liquid and is shipped in this form, the latter remains as a gas and is supplied in heavy steel pressure cylinders. The immediate danger in handling these materials is much less than that with HCN. In using Carboxide, for example, the required number of cylinders is placed in the space to be fumigated and a man opens the valves on one after another till all are opened, and then goes out. This has been done in relatively large spaces where as many as a dozen cylinders were used by fumigators unequipped with gas masks, without apparent injury.

Fire Hazards

Fire hazards fall into two categories: One is the hazard of starting or increasing a fire; the other is the danger of poisoning to those fighting a fire. The latter danger would appear only when fire breaks out in a building that is being fumigated. In this instance, of course, it would be impossible for firemen to enter a building under fumigation with HCN unless they were protected by gas masks. This is an important consideration, since many fires that may be rapidly extinguished from inside a building are difficult to fight from the outside. If firemen do not have gas masks, the only thing to do is to break open doors and windows as rapidly as possible so that the gas may escape. It is realized that the fire itself may be greatly augmented by feeding it fresh air. Once a fire really gets under way, the draft produced will very rapidly clear out the gas.

There is no danger of explosion from the amounts of HCN used in building fumigation, except with the very heavy dosages sometimes used in tobacco warehouses. The lowest explosive mixture of HCN is 6 per cent of the vapor in the air, while in fumigation it is rare to have more than 2 per cent. Apparently there is little danger of explosion or combustion of Carboxide, or ethylene dichloride with carbon tetrachloride; but either ethylene oxide or ethylene dichloride alone is very inflammable and may be used in such amounts as will cause explosion or direct extension of the fire by the gas.

Fires have been started with the solid forms of HCN (Zyklon, discoids) by their being scattered close to stoves in which the fires had not been extinguished. In the generation methods of producing HCN a considerable amount of heat is evoked by the reaction. With straight HCN (NaCN and sulphuric acid) the heat produced is not sufficient to start a fire; but with the original HCN-CNCl technique, spontaneous combustion sometimes occurred. Safti-fume, in the form of briquettes, appears to have overcome this hazard by slowing the reaction.

In storage, HCN, Zyklon, HCN discoids, ethylene dichloride, ethylene oxide, and Safti-fume briquettes, somewhat increase the fire hazard. They are not themselves likely to start a fire, but being inflammable may materially increase its proportions. In a fire Zyklon and discoid cans soon explode, without much violence, but the liberated combustible gases spread the flames. It requires a relatively hot fire to cause the explosion of the fumigants packed in heavy steel cylinders; but when these do let go the explosion is a violent and destructive one. Safti-fume briquettes contain sodium chlorate. The heat of a fire causes multiple small explosions of this chemical.

Fortunately, in cases where fire reaches stored fumigants, HCN is burned, the resultant gases being relatively innocuous. The same is true of ethylene dichloride and ethylene oxide, so that poisoning by the gases is not to be feared. This is not to be confused with fires starting in buildings under fumigation. In this case the already diffused gases are in too low concentration to burn, but quite sufficient to poison; and until removed by ventilation (which may be accomplished by the fire itself), they must be reckoned with.

Sulphur and carbon bisulphide are two fumigating materials which produce a poisonous gas, sulphur dioxide, when burned. When produced in dangerous quantities, however, it is intolerable without gas-mask protection.

Conclusion

It is quite true, as has been frequently demonstrated, and is daily demonstrated in New York City, that trained fumigators can do their work and handle the most deadly gases with safety, both to themselves and to others. It is, on the other hand, quite as true that, in the hands of the ignorant or careless, fumigation is a menace to all concerned. Hydrocyanic-acid gas is a deadly gas. It is not, however, so deadly as popular belief would make it. A single whiff of it will not kill you; in fact in the great majority of instances a good many whiffs may be taken with safety. Yet, one unfamiliar with its effect should not needlessly expose himself. Above all remember this advice: Keep your head and do not be stampeded because there is cyanide. On the other hand, do not rush in headlong; stop a moment and think.

(Excerpts from paper presented at the Police School, New York City.)

New York Firemen Meet

The sixteenth annual entertainment and reception of the Uniformed Firemen's Association of Greater New York was held at the Madison Square Garden, New York City, on January 14. There was a special concert by the New York Fire Department and this was broadcast over station WNYC. The guests were entertained by the Police Department Glee Club and a number of vaudeville acts.

Vincent J. Kane, President, presented gold badges to Mayor John P. O'Brien, John Sullivan, President of the New York State Federation of Labor and Fred W. Baer, President, International Association of Fire Fighters.

A red signal was set up in the auditorium which flashed all fires reported during the evening in the boroughs of Manhattan, Bronx, Brooklyn and Queens.

Delegates and representatives of firemen's organizations in the state met at the Forrest Hotel, the following day and discussed salaries, pensions, and kindred subjects. A number of New Jersey communities were represented at this meeting.

Convincing Causes of Serious Fires

During Fire Prevention Week, the Fire Department of West Allis, Wis., arranged an exhibit in the fire station, of articles gathered during the year that were the direct causes of fire in that city. The public was invited to inspect the display.

Recent Decisions which Emphasize Legal Aspect of

Employment of Firemen

By LEO T. PARKER, Attorney-at-Law

THE higher Courts have consistently held that if a municipal employee is not *legally* discharged, he is entitled to receive compensation for services rendered the city *after* the officials attempt to discharge him.

For illustration, in Moore vs. Pitman, 160 Atl. 559, it was shown that a municipal employee was receiving a salary of $25 a week when an official attempted to discharge him. The employee did not believe that the discharge was legal and continued in the employment for several months afterward without receiving compensation for the services rendered. He filed suit against the city to recover salary for the period of time during which he performed services without pay.

In view of the fact that he was not legally discharged the lower Court held the employee entitled to recover full compensation, and the higher Court sustained this verdict, saying:

"If the jury found the plaintiff (employee) was not legally discharged, and that he did render services to the city, he would be entitled to compensation for such services."

When Mayor May Suspend Municipal Employee

Generally speaking, the Mayor of a municipality may legally suspend a fireman if the state laws or city ordinances may be interpreted to mean that the Mayor has this authority. This point of the law was discussed in the late case of Whalen vs. Ryan, 181 N. E. 246.

The facts of this case are that a state law provides, as follows:

"The several heads of the departments, boards and commissions, shall, with the approval of the Mayor make appointments of officers and employees whose appointments are not otherwise provided for."

In consideration of the fact that appropriations had been considerably reduced by abatement of taxes, loss of taxable property, etc., the Mayor of the city recommended that certain employees should be suspended and laid off. The employees offered objection and met the Mayor in personal conference. Later the employees filed suit contending that the Mayor had no authority to suspend them. However, the higher Court upheld the Mayor's decision, and said:

"By the terms of the statute, the amount of an appropriation recommended by the Mayor cannot be increased without his approval. The recommendations for the reduced appropriations seem to have been amply justified by the reasons therefor stated in the auditor's report. . . . Furthermore, the petitioners (employees) asked for the hearing which was granted and a decision was rendered in each case by the Mayor. Three of them asked for a review of that decision. None of them contended that the Mayor could not hear the case and none of them has any valid ground for now contending that the action taken by the Mayor thereon was not a valid decision."

Period of Employment Implied

The law is well established that although a law, which relates to employment of municipal firemen does not specify the term or duration of the employment, the Courts imply that the term of the employment is *fixed* if the testimony indicates that the employing city officials clearly designated the period of the employment without violating some valid law.

In Giorando vs. Brady, 160 Atl. 761, it was disclosed that a state statute prohibits discharge by city officials of honorably discharged veterans without just cause where the term of employment is fixed by law.

Certain city employees, who were honorably discharged soldiers, were discharged from service. No state or city law specified how long such employees were to be employed, but the city officials had hired them for one year.

The employees refused to accept the notification of discharge at the end of the year and continued in the employment of the city and filed suit to collect payment of salary. However, the higher Court held the city not liable, saying:

"The act in question grants immunity from discharge of honorably discharged veterans without cause *only* where the term of employment is *not* fixed by law. When the term of employment is fixed by the governing body, as admittedly occurred in this case, the term is fixed by law. . . . Where one is employed for a fixed term and continues thereafter to occupy the place without other appointment, he does *not* acquire any other status than that of a holdover; and, as a holdover, he does not obtain the benefits of the Veterans' Act in question."

Veteran Has Burden of Proof

Generally speaking, a veteran who claims to have been illegally discharged has the burden of proving his contentions.

Subjects Treated in This Article

- Fireman Not Legally Discharged Entitled to Compensation After Attempted Discharge
- When a Mayor May Suspend a Municipal Employee
- Period of Employment Implied, When Not Specified by Law, But Designated by Officials
- Burden of Proof of Illegal Discharge Is on Veteran
- When State Law Authorizes Discharge, Right Is Taken from City Council
- When Fireman is Legal Employee of City
- Legal Construction of Phrases or Words
- Broad Interpretation of Employment Laws

For instance, in Owen vs. City of Detroit, 242 N. W. 878, it was shown that a person named Owen was appointed to a municipal position which was later abolished. Owen and other employees were discharged, and the work distributed among those remaining in the division. The action was in the interest of economy, and resulted in a saving to the city. The record showed no bad faith or subterfuge in abolishing the positions.

Owen made no demand for reinstatement or hearing before the Mayor, but brought suit to compel his reinstatement in service on the ground that, as he is an honorably discharged veteran of the World War, he could not be removed without a hearing before the Mayor and upon written order of the Mayor, under laws of the state.

However, the Court held the discharge legal, saying:

"The statute does not circumscribe the right of proper municipal officers to abolish positions or employments and thereby remove veterans 'in the absence of bad faith or subterfuge intended to defeat the statutory preference.' . . . If the position is legally abolished, the statute does not apply, and the employee has no right to a hearing nor the Mayor power to grant one. . . . In submitting his case to the Court, plaintiff (Owen) assumed the burden of showing a clear legal right to reinstatement. It was incumbent on him to show that his removal was illegal because the abolition of his position was a colorable subterfuge for his discharge, and was not done in good faith."

State Law Authorizes Discharge

It is well settled law that where a state Legislature adopts a statute authorizing a civil service commission or other body to employ and discharge municipal employees, such right is automatically taken away from the City Council.

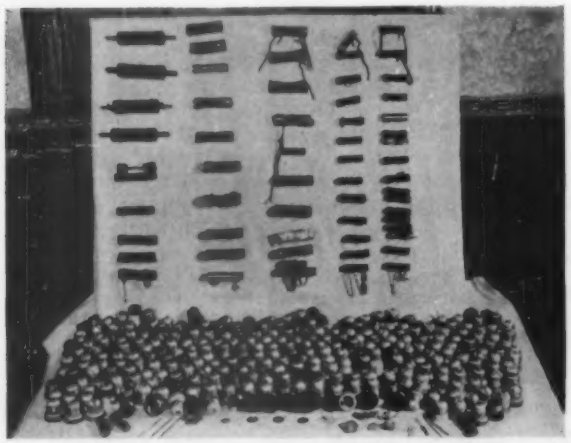
For example, in Naeseth vs. Village of Hibbing, 242 N. W. 6, a state law provides that the Civil Service Commission has

"absolute control and supervision over the employment, promotion, discharge and suspension of all officers and employees of the department."

A Chief of a municipal department was dicharged by the commission. Suit was filed to compel reinstatement on the grounds that the law did not give authority to the commission to discharge the head of a municipal department and that this duty rested with the Municipal Council.

However, the Court held the discharge to be legal, stating the following important law:

"There is nothing specific to exempt the department head. On the contrary, everything confirms the conclusion that he is included. The plain purpose of the act could not be accomplished otherwise. . . . It was the intention of the Legislature to make the right of removal the power for good it ought to be by putting it in the hands of an independent commission. Exemption of department heads would go far to frustrate its whole purpose, and so is not to be read into the law by unnecessary and strained implication."



Many Electrical Hazards Revealed in City Survey

About one thousand defective fuses and many other fire hazards were found in a seven weeks' city-wide inspection of Wilkes Barre, Pa., by members of the Fire Department under the direction of Chief Thomas Flannery. More than 15,000 homes, 3,900 stores, 195 public buildings and sixty factories were visited. The city was divided into districts and twelve firemen were assigned to each area. Although the drive was centered on bad fuses and defective electric wiring, other hazards did not escape the examiners.

When Fireman Is Legal Employee of City

Considerable discussion has arisen from time to time whether or not the members of a municipal Fire Department are legal employees of the city to the extent that they may recover compensation under state compensation laws for injuries sustained while in the performance of their regular duties.

For illustration, in Kennedy, 177 App. Div. 56, the Court held that a city fireman is not an employee within the meaning of the Workmen's Compensation Act, unless the state laws may be interpreted to *include* employees of this classification.

On the other hand, in the leading case of Macon vs. Whittington, 171 Ga. 643, it was shown that an insurance company issued a policy in which it expressly covered municipal firemen. A fireman was seriously injured while performing his duties and filed a claim against the insurance company to recover payment of insurance. It was shown that his salary was considered in fixing the premiums, and that the insurance company prepared the report of the injury which was filed with the Industrial Board, and also a pension provision was shown to exist between the city and the fireman which was approved by the board and paid.

In view of this testimony the Court held the fireman entitled to compensation and, also, explained that under these circumstances the Court considered the fireman a legal employee of the city, as far as the insurance company was concerned.

Also, in the late case of Parker vs. Travelers, 163 S. E. 159, the question arose whether or not an employee of a city, when performing governmental duties, should be considered a legal employee of the municipality from the standpoint of collecting compensation for injuries sustained. In holding the official not a legal employee of the city, the Court said:

"This construction would leave intact the common-law doctrine, frequently applied in this state before and since adoption of the Code, of nonliability for conduct of officers, agents, and servants of municipal corporations in respect to duties devolving upon them in virtue of the sovereign or governmental functions of the municipality. . . . Is the existence of the relation of employer and employee, of the workmen's compensation act, necessary in order to confer upon the industrial commission jurisdiction to entertain a claim for compensation in any and all cases? The question is answered in the affirmative."

Legal Construction of Words

It is always the intention of the Court to give legal phrases or words in an employment contract, lease or city charter the generally understood meaning accepted by an ordinary individual. Therefore, the words "injury" and "killed" are not limited to injuries caused by external violence, physical force, or as a result of accident, but they are given a much broader and liberal meaning. For this reason the word "injury" has reference to the consequence or disability that results therefrom.

For instance, in Casserly vs. City of Oakland, 12 P.

(2d) 425, it was shown that a city fireman died as a result of a disease contracted while participating in a fire drill under orders from his superior officer.

The widow of the fireman made application for a pension in accordance with the provisions of the city charter which provides, as follows:

"The Board of Trustees shall, out of the Firemen's Relief and Pension Fund, provide for the family of an officer, member or employee of the department, who may be killed while in the performance of his duty."

After reviewing the application the Board held that the fireman was not killed while performing his duties and, therefore, the widow was not entitled to recover a pension. The widow appealed to the higher Court which reversed the Board's decision, and said:

"The sole question here presented is whether a fireman who contracts a disease in the performance of his duty, and whose death occurs within a short time thereafter as the direct result thereof, is 'killed while in the performance of his duty' within the meaning of the charter of the city. . . . The words 'injury' and 'killed,' as used in the charter, and similar provisions which provide for compensation in cases of this character are not limited in their interpretation to injuries caused by external violence . . . but they are given a much broader and liberal meaning. So construed, they include any injury or disease arising out of and in the course of the employment, which causes incapacity or death."

Broad Interpretation of Employment Laws

Obviously, a municipal fireman is not a legal employee of the city if he performs services or is appointed under invalid laws. However, the Courts interpret employment laws liberally and will not hold a law void, unless its provisions clearly violate a constitutional provision or other law enacted by a superior lawmaking body.

For this reason the Courts have consistently held that a city ordinance is not void which authorizes appointment of municipal firemen, and such appointments are confirmed by the City Council, although the ordinance does not specify the number of firemen to be appointed. Also, a member of a City Council which enacts an employment ordinance cannot subsequently declare it void.

For example, in Hamill vs. City of Clifton, 160 Atl. 882 it was disclosed that an ordinance was enacted which provides, as follows:

"The personnel of the full paid Fire Department shall consist of a Chief Engineer and as many assistant Engineers, Lieutenants, Master Mechanics and firemen as the City Council may, from time to time, deem necessary for the efficient working of said department. All members of the full paid Fire Department shall be appointed by the Fire Committee, on the confirmation of the City Council. . . ."

Subsequently a member of the City Council contended that the ordinance is invalid for the reason that it does not definitely specify the number of firemen who shall be appointed and, also, because the ordinance does not authorize the Fire Committee to specify the number to be appointed.

The counsel for the city argued that since the Council member agreed to the terms of the ordinance he had no right to question its validity. Also, it was pointed out that the Council could enact another ordinance specifying the number of firemen to be appointed. In upholding the validity of the ordinance, the higher Court said:

"It would appear, therefore, that the city had, by ordinance, created the department and had designated the method of appointment of employees of such department. That method was by appointment of the Fire Committee and then by confirmation of such appointment by the Council. . . . Nor does the ordinance leave the number of firemen to be appointed to the caprice of the committee, because the ordinance provides for nomination by the committee and confirmation by the Council, so that the final judgment as to the number of employees as well as the necessity for such appointments is in the Council. Hence, the determination as to the number deemed necessary, from time to time, is in the Council and not in the committee."

NEW YORK CITY SHOWS INCREASE IN FIRES AND LOSSES FOR 1932

Brownsville Section of Brooklyn Continues Lead in Number of Alarms—Malicious False Alarms Increased Two Per Cent

By Wm. Jerome Daly

AN increase of $2,584,771 in total losses, 1,249 in alarms, 1,229 in fires and 31 cents in per capita loss, is reported for the year 1932 in the statistical record of the Bureau of Fire, which will become part of the annual report which Fire Commissioner John J. Dorman is preparing for the Mayor of New York City.

With its 314 square miles of territory, containing 7,218,223 persons which is 128,134 more than the year 1931, the metropolis had last year a total of 45,274 alarms of which 14,051 were false or unnecessary; 31,223 actual fires of which 18,908 were in buildings, 142 in vessels and 12,173 miscellaneous.

The fire fighting force continued to uphold its annual good record of confining 92% of all fires to the point of origin. There were 28,769 fires confined to the starting point which is 142 greater than in 1931; 2,002 were confined to the building and 452 extended to adjacent premises. The per capita loss last year was $2.48. The total losses amounted to $17,947,791. The assessed valuation of the real estate in the city is $18,806,166,924.

Malicious false alarms increased 2% over the year 1931. Last year there were 11,867 malicious false alarms of which 11,464 came from street boxes.

The pumping units of the department, including high pressure stations delivered a total of 148,233,140 gallons of water of which 55,027,921 were delivered by fireboats. The volume of fresh and salt water pumped on fires in the year 1931 was 75,297,180 gallons.

The Brownsville section of Brooklyn continued to uphold its annual record for having the most number of fires. The 44th battalion district which embraces that area had 1,790 fires during the year 1932, an increase of 267 over the year 1931. The West Farms (east side) section of the Bronx was second with 1,174 fires last year.

A total of 14,264 fires were extinguished without any engine streams; 12,829 fires were just put out with one engine line; 1,711 fires with 2 or 3 streams; 355 fires with more than 3 streams and 338 with sprinklers. In the high pressure column 1,351 were extinguished with 1 h.p. stream; 251 with 2 or 3 h.p. streams and 124 with more than 3 h.p. streams.

Newly Elected Chiefs

The following have been elected to head the Fire Departments in their respective municipalities:

Forest Grove, Wash.—Walter Vandervelden
Niles Center, Ill.—George Pasek
Mountain View, N. J.—Albert Muhlmeister
Seaside Heights, N. J.—J. Verne Van Kirk
Wildwood, N. J.—Elmer Hewitt
Huntington, N. Y.—Arnold Conway
Germantown, N. Y.—Harold Denager
Patterson, Cal.—O. S. Ball
Princeton, N. J.—Harry H. Kerr
Moulton, Tex.—R. B. Papacek
Chester, N. Y.—Gail Burrows.
Burbank, Cal.—B. M. Patton
Watchung, N. J.—Edgar W. Titus
Falls View, Ont.—John Allen
Fairview, N. Y.—Albert Johnson
Bloomingdale, N. J.—Charles Van Duyne
Hohokus, N. J.—Frank Miller
Friendship, Wis.—Charles Fichter
Kenosha, Wis.—Fred J. Moeller
Glenwood, Ia.—Lewis Robinson
Hamburg, Pa.—I. S. Schlenker
Park Ridge, N. J.—Robert Scharrenberg, Jr.
St. Johnsburg, N. Y.—Henry Broeker
Union Ore.—Charles Hiatt
Trevorton, Pa.—Alex Cooper
Tama, Ia.—Chris Daniels
Chelsea, Ia.—Albert Benda
Tuckerton, N. J.—Robert Toy
Gloucester Heights, N. J.—James Florich
Cortland, N. Y.—Lewis W. Lang
Glenwood Landing, N. Y.—Oscar Wiggins
Meriden, Conn.—John F. Maroney
Dunbar, Pa.—George Porter
Islip, N. Y.—John Dempsey
Daly City, Cal.—John F. Coyne
Loup City, Neb.—William Vodehnal
Port Jervis, N. Y.—Howard Wheat
Belle Fourche, S. D.—Charles J. Miller
Ida Grove, Ia.—Homer Keith
Lemoore, Cal.—T. P. Thomsen
Platte, S. D.—Albert Banderboom
Union Beach, N. J.—E. Cullen
Upper Darby, Pa.—Stanley D. Russell
Camas, Wash.—Herman Rickert
Seaside Park, N. J.—Clifford R. Brown
Blackwood, N. J.—Harry Tomblesson
Toms River, N. J.—Jack S. Costa
Marlton, N. J.—Harry Ross
Branchville, N. J.—T. M. Reed
Hillsdale, N. J.—Albert Westervelt
Franklin, N. J.—Clarence McEntree
Oakfield, N. Y.—Clarence Burdett
Willow Grove, Pa.—Ray Sellers
Bellmawr, N. J.—Archer McCreery
Spanish Fork, Utah—Willis M. Brockbank
Marion, N. D.—Emil Bassen

The Fire Service Instructor

The eighth installment of a treatise to aid those responsible for training men in the fire service to develop a systematic type of teaching.

By O. D. ADAMS,
State Director for Vocational Education in Oregon, and Prof., Industrial Education, Oregon State College

and

EDWARD L. BOATRIGHT,
Battalion Chief, Portland, Ore., Fire Department, and Director, Portland Fire College

Chapter V (Continued)

Examination

Fire College

Grade .....Name .....
Div. .....Co. ..... No. .....

Firemen's Course

Date .....

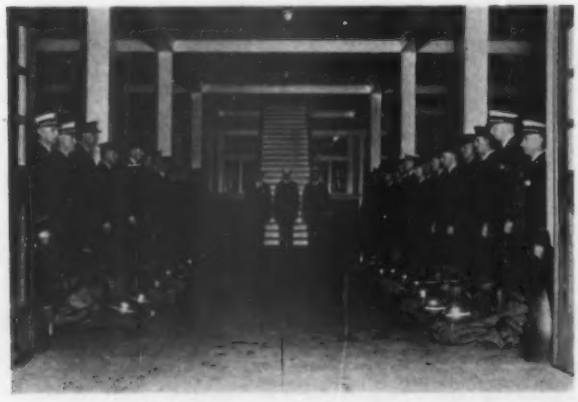
WRITTEN EXAMINATION

Instructions

Read carefully each of the 100 statements which follow. In the space between each number and statement are the words "Proper" and "Improper." Underline the word "Proper" where the statement is proper. Underline the word "Improper" where the statement is improper. Follow instructions exactly.

Proper	Improper	Ventilation should be provided for carbon monoxide gas.
Proper	Improper	The success of handling fires in cellars and sub-cellars often depends on quick and good ventilation.
Proper	Improper	Ventilation can never be accomplished by removing the glass over the elevator shafts.
Proper	Improper	In opening windows in side walls, no attention need be given to neighboring structures.
Proper	Improper	Scuttles in roofs can be used to good advantage in ventilating.
Proper	Improper	In opening up for ventilation where unnecessary damage is liable to occur, discretion should be avoided.
Proper	Improper	In a building charged with smoke, ventilation should be started at the bottom, working upward.
Proper	Improper	Gases are sometimes heated to a temperature higher than that of ignition.
Proper	Improper	In cellar or sub-cellar fires, it is occasionally necessary to remove the dead lights in the sidewalk near the building to provide ventilation.
Proper	Improper	Indiscriminate opening of windows and doors is advisable in all cases.
Proper	Improper	When hot air rushes downward it is immediately followed by cold air from above.
Proper	Improper	Backdraught is more pronounced where fires have been smouldering for a long time and gases are forming.
Proper	Improper	In buildings having elevators, the employes upon leaving at night always close elevator shaft doors.
Proper	Improper	Ventilation permits the hot air and gases to escape.
Proper	Improper	Hot gases upon being released always rush downward.
Proper	Improper	The atmosphere has no effect upon good ventilation.
Proper	Improper	Ventilation hinders the firemen in breathing and locating a fire.
Proper	Improper	Cold air entering a building from below assists in forcing hot air and gases upward.
Proper	Improper	Gases formed by heat expand and become light.
Proper	Improper	Heated air in contact with combustible material sometimes causes fires.
Proper	Improper	Opening up over an elevator shaft will cause the fire to mushroom.
Proper	Improper	"Opening Up" is a fire department term for "ventilation."
Proper	Improper	Heated gases and air accumulate at the top of buildings on fire.
Proper	Improper	Heated air and gases are heavier than air.

(There were 100 questions in this examination, but only a few are listed here.)



Inspection of a Fire Department in Quarters

Chapter VI

Helps in Teaching

I. Principles of Learning:

1. *The Law of Readiness:* As you have learned, it is easier to teach a new learner, if he is at first prepared to take on the new information, the new knowledge, of the lesson. As an illustration of this point, take the golf player. Before he can get anywhere he must concentrate on his game. He accomplishes this best when he can get out and practice a few strokes before starting. Let the learner do the same thing, only you furnish the material for him to work on. Thorndyke, an eminent psychologist, calls this the LAW OF READINESS. It is practiced in teaching, by "preparing the mind of the learner for the new lesson."

2. *The Law of Exercise:* We learn to do by doing, and the more we do a thing, the better we do it. Practice makes perfect—why? Because of the repetition, over and over. The LAW OF EXERCISE means just this—a drill method—over and over and over, until the action becomes second nature and a habit is formed. Military drill is a good example of the LAW OF EXERCISE put into use.

(*To be continued*)

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

MAINTAINING BATTERIES ON FIRE APPARATUS

TUCKED away on the fire apparatus, in a place where it is not readily observed, is the nerve center of the massive mechanism provided to extinguish fires. Without it the engine fails to start and the pride of the company becomes nothing but a hulk of metal. The battery, although it is a small part of the entire assembly is a very important factor.

It is the basis of the ignition system, the starting mechanism and the lighting system of the apparatus. Heavy demands are made on the battery. The continual starting of the apparatus as part of the daily motor turn-over inspection to see if the mechanism is in good condition, drains the battery of its stored power.

When a battery becomes "run down" it must be charged and brought back to standard conditions. This can be done either by the Fire Department or the charging can be done by outside battery stations. Regardless of the policy adopted, the nerve unit of the apparatus must never be permitted to fall below the danger line. It must always be ready to give proper service.

In the box on this page is the problem in full that is discussed in this issue. Because of the large number of replies received to this discussion, it will be continued in the March issue. Should you have any comments on this problem, write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

Discussion of the Question

C. W. Ringer, Chief, Minneapolis, Minn.: In keeping our batteries in proper condition, we make use of a motor generator charger, mounted on a two-wheel cart to facilitate moving from one piece of apparatus to another. The battery box is equipped with a polarized socket and the charger with a polarized plug attached to a short wire, which arrangement allows the rig to leave the station even though the charger is connected, since the connection is broken the moment the rig moves. These chargers are made in our shop, and are the result of much experiment with various types of vibrator and bulb type chargers.

Each station is equipped with one of these chargers. When the battery drops to no lower point than 1,225 specific gravity, the men in the station attach the charger. If after being charged for 24 hours, the battery fails to come up to the proper point, the shop is immediately notified. A new battery is then sent out, the old one taken to the shop and given a charge with the large GE motor generator kept there for that purpose. If this fails to bring the battery to the proper gravity, it is sent to the battery company from which it was purchased, where it is either condemned, repaired or replaced. Each battery is numbered at the time of purchase, and a card record kept of the location, length of service, cost, guarantee, etc., until it is condemned.

It is difficult to estimate the average number of times our batteries necessitate charging, since this is dependent upon the number of runs, the type of apparatus and the nature of the fire.

S. D. O'Conor, Chief, Beaumont, Tex.: Our batteries are never removed from the vehicle unless it is necessary to clean the battery box or to repair a battery which has become inefficient due to age, mechanical trouble or cell failure.

Trickle chargers are used in a few instances. The preferred practice that is being followed is to make semi-weekly gravity tests of each cell of every battery in service. The batteries are charged by a motor generator set which is capable of charging all batteries in each individual station in series at a normal rate of from five to ten amperes. Every station is supplied with a motor generator set or rectifier for this purpose. Each piece of apparatus is equipped with a polarity pin plug which is served by a flexible cable when charge is being done. When batteries are on charge and an alarm is answered, merely driving the apparatus out of the house automatically stops the motor generator or rectifier, which ever the case may be. When the pin connector parts as the machine moves off, this is accomplished by an under-current relay.

Our batteries here have a life of from two and a half to five years, and in a few instances we have had batteries that have lasted six years. We do not use car generators on any of the apparatus, with the exception of chief cars, supply cars and repair trucks. Where six-volt batteries were formerly used with a charging generator on the machine, the generator has been eliminated and the batteries have been changed to four-cell, eight volt. The additional voltage gives additional brilliancy on head lights and wonderful performance on starting motors and driving sirens. On machines that are equipped with twelve-volt electric systems, the generator is also eliminated, but the battery capacity remains the same. The eight-volt battery that we use is not a standard battery, but is manufactured here in our own shops where we are equipped for this work.

Wm. G. Lutkey, Chief, Oakland, Cal.: We have very little trouble with batteries due to the fact that the engineers are held responsible should any of the batteries run down.

Batteries are maintained by sending chargers to whatever company calls for it. We have two chargers and they are kept busy all the time working from company to company. Where the chargers fail to recharge the batteries in the company house, batteries are taken care of at the department shop.

W. C. Shepard, Chief, Pittsfield, Mass.: The mechanician of the department makes weekly inspections of batteries for gravity and for voltage per cell, as well as noting terminal conditions. The batteries are charged by a portable motor generator set mounted on a wheeled truck. This can be disconnected and wheeled out of the way

HERE IS THE PROBLEM

How does your department keep the batteries on fire apparatus in proper condition?

Are trickle chargers employed, or are the batteries removed and charged by private battery stations, or by department repair shop?

On the average, how often do you find it necessary to charge these batteries?

in a few moments. This generator enables the Department to get along without spare batteries being carried as the trucks are never out of commission. Spare batteries have the disadvantage of having to be charged and discharged every month.

The motor generator mentioned is large enough to put a charging rate of 12 amperes into the batteries. This rate of charge is sufficient to enable a battery to crank the trucks in 2 hours; this of course, is for the average battery. The charging rate of batteries is governed by age and condition. Every two weeks the batteries are subjected to a 12-hour charge. By using this method of caring for batteries of the department, we rarely get less than four years out of a battery, in some cases as much as five years. The batteries referred to are Williard Thread Rubber Batteries.

Clyde Gold, Chief, Pampa, Tex.: We use the heavy duty battery and keep them fully charged at all time. This is done by testing each battery separately at least once each week. A chart is kept of the reading after each test.

We haven't had a battery out of our machines in over two years. We do our own charging with a machine made for that purpose. It is a very simple and inexpensive method. I have never made it a practice of having batteries rebuilt, for I believe it is far better to install new batteries than to have old ones repaired.

It largely depends upon the use of a battery as to how often they have to be recharged. The greatest use ours gets is from starting and warming up the motors twice daily. We usually give them a slow charging about once each month, or more often if necessary to keep them fully charged. We find that the most harmful thing for a battery is letting them get too low, then charging them too fast.

C. Grover Rech, Chief, Tonawanda, N. Y.: The life of our batteries averages 7 years. Apparatus operators inspect batteries daily keeping same free of corrosion by using vaseline on battery and all connections. It is also well to keep the plates covered by adding water when necessary.

We have a small motor generator in each fire station charging the batteries in the apparatus without removing them. We give them a slow charge, not charging them over 5 amperes. We find this very satisfactory. In case of alarm while charging battery, the operator pulls out connection and the apparatus is ready to respond.

We charge batteries monthly, keeping record under each battery box cover. We also use volt and ampere meter so as not to overcharge.

Edward Ramie, Chief, Ogdensburg, N. Y.: We have our battery checked by a competent service man for any defects and in this way we keep our batteries in proper condition. The service man, if possible, remedies any such defects he may find or if we find that the cost of repairing the battery to be too high we replace them with new ones.

We use a Tungar charger with a polarity plug inside of battery box for charging our batteries. We find this to be very convenient in answering alarms when charger is on due to the fact that no trouble is experienced when the apparatus rolls out of the station.

We have to charge our batteries every two or three months. This, of course, depends on the number of runs made, and whether these are at night or in the daytime. Night runs use more lights and therefore puts more load on the battery. The age of the battery must also be considered when stating how often batteries must be charged.

Napoleon Belfy, Chief Muskegon, Mich.: Our batteries are tested weekly by drivers to ascertain the strength of the battery at all times. We also keep the batteries clean from corrosion. Batteries are charged when they drop to 1200. By the above mentioned methods we keep our batteries in good condition.

The batteries are not removed from the apparatus when we charge them for we use our own chargers. We have four trickle chargers in the outside houses, and one large Kodel Electric Co. Kuprox Rectifying unit at our central station.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

Since so many replies were received to the problem of maintaining batteries, it was necessary to divide the discussion in two parts and continue it in the next issue.

We find that new batteries have to be recharged about once every three months during the first two or three years. After this period it becomes necessary to charge them about once every month after which time the battery is replaced.

Owen C. Dunn, Chief St. Paul, Minn.: We buy the material and assemble all our batteries at the repair shop. A record is kept in the office of first cost, necessary repairs and charging. Each battery is tested as to condition when brought in for charging.

We have a Tungar battery charging outfit and do all our own charging. Extra batteries are kept for exchange. Hydrometers are supplied for each station.

We find it necessary to recharge these batteries every 30 to 60 days.

Frank W. Fuller, Chief Brainerd, Minn.: Our batteries on the apparatus are kept charged by using a 2-7 ampere bulb type rectifier. We use two six-volt batteries in each battery box and we have two common baseboard receptacles in the side of the box and wired to each battry so it is only necessary to plug in and the charging is started. When answering an alarm the plug is pulled and dropped on the floor, and we are ready to move, as the cover is not removed from the box only when testing the batteries.

We charge our batteries on the average of once a month. We are using sirens with ten-inch rotors which we made ourselves. We believe that our batteries are giving as good service as any others used in the various Fire Departments.

J. H. MacWhirter, Chief, Eveleth, Minn.: One man is assigned the duty of caring for batteries, and he determines the necessary repairs, etc., by regular daily inspection. The electrolyte is never below the tops of the plates.

We have a Tungar rectifier installed in the station and wires placed in a conduit to a reel. This reel hangs on the ceiling in the center of the station and has 50 feet of rubber covered extension cord from the reel to the battery. Our batteries are all charged on the truck. We charge our batteries every three weeks.

O. Weigand, Chief, Whiting, Ind.: We have, as part of station equipment, a rectifier capable of charging up to 10 amperes. We have a stationary socket fitted into the battery box. This socket is fool-proof constructed, so that it is impossible to hook it up to the wrong pole. It is part of the driver's daily duty to test battery and we find, to maintain the battery above the requisite 1300 charge, it is necessary to plug in on the average of twice a week, for 6 hours. In case of an alarm, no time is lost, just a pull on the plug and we are all set.

Wm. H. Wayand, Chief, Scotia, N. Y.: The batteries on our apparatus are checked every two weeks for proper water level and clean terminals. They are given a charge of approximately 24 hours duration once each month. The department electrician checks the specific gravity before and after the charging and keeps a record of these readings.

We use a 6 volt-6 ampere Tungar rectifier and do not remove the battery from the apparatus while charging Ordinary outlets are conveniently located on the wall near each truck to plug in the rectifier. A sign "battery on charge" is hung over the steering wheel to avoid starting out with the truck without disconnecting the rectifier.

B. E. Bordnax, Chief, Seminole, Okla.: We do not have any trouble with the batteries. We have them charged and new acid put in them every 6 months. New batteries are installed every 18 months. Our trucks are started at 8 a.m. and 6 p.m. every day and run for 30 minutes. This lubricates the motors and recharges the batteries. This aids in keeping both the motors and the batteries in good condition.

John Lennox, Chief, Camden, N. J.: We keep the batteries in our department in good condition by checking them daily. Tungar portable chargers are used and are put on the batteries of the apparatus once a week.

Reese O. Carter, Chief Bluefield, W. Va.: The drivers are held responsible for batteries and they should check them for proper charge at regular intervals. The rectifier is mounted in the alarm room and the charging line is run to the apparatus room at the ceiling with drops at the ceiling running to the apparatus stalls.

Drivers are responsible for connecting drops and charging batteries.

The number of times for charging is few, but is generally determined on the amount of time required to start the motor. Drivers are instructed to start the motor once daily.

A. B. Woodring, Chief, Tyrone, Pa.: Each company has its own charger in our department. This charger is in a separate room with wires running to plugs beside each truck, so the batteries can be charged without removing them. It is necessary to test these batteries every ten days and charge if necessary.

Thomas McHugh, Chief, Old Forge, Pa.: Our batteries are charged regularly which keeps them in good condition. The batteries are removed and charged by private battery stations every two months.

C. E. Underwood, Chief, Manistique, Mich.: Our apparatus batteries are charged by a Tungar charger located on the apparatus floor and can be used on the batteries without removing them. This is done by a pair of wires and wall plugs near each truck. We also have extra batteries on hand to use in case it becomes necessary to remove one. Trickle chargers were at one time in use in our department but with poor results.

All batteries are checked twice a week and charged when necessary. The life of a battery depends upon the use and care it receives.

G. T. Haskins, Chief, Greenwood, Miss.: In my experience with batteries on fire apparatus for eleven years, I find that a thorough inspection of batteries, keeping plenty of water in them, and keeping the terminals clean at all times aids in keeping them in proper condition. The batteries should be fully charged at all times, and kept right on the rack. A solution of baking powder and water will clean a battery perfectly.

Trickle chargers are usually very satisfactory in small departments. We have three pieces of apparatus and find this type of charger to be satisfactory for our use.

A new battery will stay charged quite a while with the generator in good working condition. Some batteries have given 12 or 18 months service. Others will have to be charged more often—20 to 30 days—the average life of batteries on fire apparatus with good care will last around 2½ years.

Henry A. Fox, Chief, Boston, Mass.: The batteries are tested daily in each station in our department. Stations with A.C. current are equipped with a rectifier and in district with D.C. current a resistance bank of carbon lamps are employed for charging batteries.

We maintain an elaborate battery repair shop and do all our own work.

Our batteries are charged as often as the hydrometer reading indicates that recharging is essential.

L. A. Moore, Chief, Durant, Okla.: We have a motor generator from which we run a ½" conduit from the service box at rear to which we have added another circuit and brought this to the center of the building between the apparatus. This does away with the necessity of removing the battery to recharge it. We charge the batteries twice each week. If an alarms comes through while a battery is on charge we just drive out and the plug pulls out of socket and causes no trouble whatsoever.

B. W. Norton, Chief, Bisbee, Ariz.: Each company in our department has a trickle charger hanging on the wall along side of apparatus. They have a short Y with the female side next to the battery and the male plug on the charger side. In case the apparatus has to leave the floor the driver pulls the plug out and does not have to disturb the battery or lose any time.

Trickle chargers are used exclusively and batteries are not removed from the apparatus when they are being charged.

As a rule we charge batteries once a week but of course this depends upon the amount of running the trucks do and if these runs are made at night. We have heavy duty sirens working off batteries and they run the batteries down a great deal.

Change in High Pressure Fire Practice

Chief John J. McElligott of the New York Fire Department has issued the following order to officers of the service:

"Officers of companies responding to second and greater alarms of fire at Coney Island, shall, after reporting to the officer in charge at the fire, and unless otherwise directed, order their pumpers to take suction from low pressure hydrants and pump into the high pressure system, at a pressure of 160 pounds, using, in all cases, the large suction, and two lines from each pumper into high pressure hydrants."

I. A. F. C. CONVENTION TO BE HELD AUGUST 21-27

THE Directors of the International Association of Fire Chiefs met at the Edison Hotel in New York on January 20 to determine the date and place of this year's Convention, as authorized by the Association at the Convention in San Diego last October.

In view of the fact that no desirable invitation was presented by any city, the directors decided to try out an innovation this year. It will be in the form of a Convention held on board the largest Great Lakes boat, the "Seeandbee." The boat will leave from Cleveland on the afternoon of August 21, and will cruise through the lakes, arriving at Chicago two days later. At this point the boat will be moored and the delegates given two days in which to see the World's Fair at Chicago. Leaving Chicago, another two days' cruise will be enjoyed, and the boat will dock at Cleveland on the 27th of August, in the evening.

In this way, four days will be available for Convention deliberations, and an excellent meeting "hall" will be provided on the boat, capable of seating 800 delegates. The boat will accommodate 1200 passengers.

The time of the year chosen is probably the most enjoyable for a lake trip, and it will insure the attendance of many who for various reasons are unable to be on hand when the Convention is held around Fire Prevention Week or just before election.

By chartering the ship, a very low rate will be available. For recreation, stops will be made in Canada and also at Mackinac Island, in addition to the visit to the World's Fair.

About 10,000 square feet of exhibit space will be available on the deck on which the meetings are to be held. But the Directors will limit the exhibits to minor equipment, including hose, tools, etc. Motor apparatus will not be shown.

Full details on the trip will be announced later in these pages.

Those in attendance at the Directors' meeting included the following:

Chief Richard Lee Smith, Pres.; Chief Selden R. Allen, 1st Vice Pres.; Chief John J. Towey, 2nd Vice Pres.; Ex-Chief James J. Mulcahey, Secretary-Treas.; Chief James T. O'Donnell, Director; Fred. Shepperd, Headquarters Manager; I. H. Case, Publicity Manager; Chief John J. McElligott, New York; Hubert Treacy, Chief Construction and Repairs, New York Fire Department; George W. Booth, Chief Engineer, National Board of Fire Underwriters, New York; Joseph H. Green, Pres., Eureka Fire Hose Mfg. Co., New York City; George Morley, The Gamewell Company, New York; A. R. Brown, New York.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Carbon Monoxide and Carbon Dioxide

To the Editor:

Kindly enlighten me on the following questions: Is it true that monoxide gas is slightly lighter than air? I have been told that the monoxide gas, which is given off by automobile engines, is heavier than air. In garages where engines are running, they claim that it hangs to the floor, also in streets where traffic is heavy. I also would like to know if in the gas, which is given off from automobiles, there is any other gas besides monoxide gas which rises to the top of the ceiling or the top of the building.

Will you kindly explain to me how carbon dioxide gas is formed? This gas, I understand is present at most fires. Are there any materials that give all carbon dioxide gas on burning? And what is the cause of this gas in buildings where fires are present?

G. M.

Answer: Carbon monoxide is slightly lighter than air. But in the discharge gases from an automobile motor, it is mixed with other ingredients which are heavier than air. The resulting gas is heavier than air, and therefore hangs near the floor. There is no other gas in appreciable quantities generated in the combustion chamber of gasoline engines than carbon dioxide and carbon monoxide.

Carbon dioxide is formed by oxidation (burning) of carbonaceous material, that is, material containing carbon. The carbon unites chemically with oxygen producing carbon dioxide upon complete combustion. Carbon dioxide is present at all fires where carbonaceous materials are burning, such as wood, cloth, coal, illuminating gas, etc.

At practically every fire encountered by a Fire Department carbonaceous materials are present, and for that reason, carbon dioxide will also be present.

Carbon monoxide is produced by burning carbonaceous material in a deficient supply of air (and therefore oxygen). Carbon monoxide readily burns in the presence of air to form carbon dioxide.

Comparison of Nozzles, Etc.

To the Editor:

What is the proper formula for determining the number of nozzles which are equivalent to a single nozzle of a certain size? I do not mean squaring any number of nozzles, adding them together and deriving the square root to give a certain size nozzle, but just the opposite. For example: one 2-inch nozzle is equal to how many 1⅛-inch nozzles; or one 1¼-inch tip is equal to how many ¾-inch tips.

Also what is the formula for roughly estimating the engine pressure at a fire when desired nozzle pressure, nozzle size, and hose layout are known? Example: desired nozzle pressure 50 pounds, 1¼-inch tip, 300 ft. of 2½-inch hose; what is the engine pressure? Example two: 1⅛-inch tip, 2 lines of 2½-inch hose 400 feet each siamesed into 100 feet of lead line, desired nozzle pressure 40 lbs., what is the engine pressure? In these last two examples, I would like formulas for mental use.

Answer: To find the number of nozzles of specified size which are equivalent to a specified large diameter nozzle we proceed as follows:

Square the diameter of the large nozzle. Divide the square of the large nozzle by the square of the small nozzle, and you will have as the answer the number of small nozzles which are equivalent to the larger one. This division may not come out even, but you choose the number of small nozzles which comes nearest to the answer you secure through division.

As an example, we are to find how many 1⅛-inch nozzles are equivalent to a two-inch nozzle.

Square the two-inch nozzle and we get 4; square 1⅛-inch nozzle and we get 1.26.

Divide 4 by 1⅛, and we find the answer to be 3, for 3 times 1.26 gives us 3.78 which is nearer to 4 than would be 5.04 (which is 1.26 multiplied by 4.)

As to estimating roughly the engine pressure when a given layout including nozzle pressure, nozzle diameter and length and diameter of hose are included, there is really no short method. 1⅛-inch nozzle at 45 pounds pressure, giving a discharge of 250 gallons per minute, approximately, is often taken as a standard fire stream. With such a nozzle diameter and nozzle pressure we get a friction loss of about 17 pounds per 100 feet of 2½-inch hose. To find the desired engine pressure in such a case, where the hose line is 300 feet long, we would first find the loss in friction, which would be three times 17 or 51 pounds. This would be added to the nozzle pressure, 45 pounds, and the answer, 96 pounds would be the pressure desired at the engine.

For parallel lines siamesed into a single line, there is no accurate and short method of solution, without having to remember and be able to employ a large number of factors and formulas without the aid of pencil and paper.

Preventing Gasoline Explosions

To the Editor:

An automobile gasoline tank was punctured and taken to a garage for repairs, which were undertaken without removing the tank. The tank was washed out by a stream of water removing, supposedly, all gasoline before welder applied his torch. But there was, however, a violent explosion. I am of the opinion that had a liberal supply of carbon tetrachloride been put into the empty tank its fumes would have mixed with the gasoline fumes and have prevented the explosion. Will you please advise me on this point.

D. R.

Answer: The application of carbon tetrachloride to the tank would very likely have removed the possibility of explosion. A mixture of carbon tetrachloride fumes with those from gasoline, or other petroleum volatiles, in proper proportions, will make a non-inflammable gas.

Automatically Primed Pumps

To the Editor:

We have a small fire engine here and it is equipped with a front-end centrifugal pump.

What I would like to know is an explanation of the meaning "They are automatically primed?"

C. A.

Answer: With reference to automatic priming of fire pumps, this merely means that they will take suction within reasonable limits without any manual operation being required for priming. In other words, the pump is placed in position, the suction connected and couplings tightened up, the pump started, and water is thereupon automatically taken without any special manipulations for priming.

The rotary pump, if in good condition, is automatically primed and will lift water about 25 feet.

Centrifugal pumps, with special priming devices, operate likewise.

In some centrifugal pumps, a small rotary type of pump is employed as a primer while in others, special designs of priming devices are employed.

NEW JERSEY FIRE CHIEFS HOLD MEETING IN HOBOKEN

Chief Thomas F. Dougherty of New York and Chief Charles A. McGinley of East Orange Give Interesting Talks

THOMAS F. DOUGHERTY, Assistant Chief, New York Fire Department, gave an interesting talk on the "Venting of Fires," at the quarterly meeting of the New Jersey Association of Fire Chiefs held in Hoboken, N. J., on January 26. Nearly two hundred persons attended.

Chief Thomas F. Dougherty

The meeting was opened by President Charles Greenfield. Capt. Patrick A. Foley, represented the city officials and welcomed the visitors.

Chief Charles A. McGinley, of East Orange, demonstrated the use of gas masks and emphasized just what could be expected of this form of protection and when this apparatus was of little use. He said that with the mask, life could be supported only as long as there was oxygen in air sufficient to support life. Unless there was sixteen per cent oxygen in the smoke, the mask was of no help. He expressed indebtedness to Chief Dougherty for training he had received at the New York Fire College. As a result of this study, he constructed a smoke tower and every man in his department now receives instruction on how to use gas masks. Chief McGinley said, "A man who will not use modern equipment will retard the development of the department. No man should be sent into a burning building alone but the men should go in pairs in the event that the mask proves defective or something happens to the fireman." The whole department should be trained.

Ross B. Davis, Chief of Philadelphia Fire Department and President of the Eastern Association of Fire Chiefs, extended the greetings of the eastern group.

John Kenlon, Ex-Chief of the New York Fire Department addressed the chiefs and said that he came only as a member of a volunteer fire department in New Jersey and that it felt fine to be retired from active service.

Chief Dougherty in his talk on the venting of buildings stressed that the small community cannot expect the same value from venting as can the larger cities. The small community is not confronted with the type of congested construction.

Detached buildings call for raising ladders to open the structure. It is necessary to create an outlet on top over a vertical opening. The scuttle that is found on the roof of such buildings means nothing. It is not of sufficient area. Skylights often have a second layer of glass at the ceiling level for heat insulation. When a skylight is broken, the fireman must be sure that the bottom layer of glass is opened. If a roof is opened the plaster below the roof must be pushed down or the roof opening is useless.

Tough cellar fires call for ventilation at more than one point. Openings can be made at the door, lift or other places. Where the front and rear are opened, it is best to close one of the two so that the streams will create a draught and better venting conditions.

Chief Dougherty said that he doesn't like to break plate glass windows but often the loss would be greater if the window was not broken. Breaking a plate window is useless if an opening is not made in the back wall of the show window so that the hot gases can get out. Prompt ventilation means less loss and prevents mushroom conditions.

In answer to a question by a delegate, he explained the condition of backdrafts. Chief Dougherty said that it was due to distillation where the temperature of the material had not reached the ignition point. Oxygen is provided by the outer air. When a spark sets off this mixture, backdraft results.

At the afternoon session, the President announced that the annual convention of the Eastern Association of Fire Chiefs would be held in Harrisburg, Pa., some time in June. It will be a two-day meeting.

A number of questions were presented for round table discussion, such as the advantage of 1½-inch hose over 2½-inch hose in fighting fires, extinguishing fires in church steeples, and so forth.

Chief Gilday, of Hoboken, described an installation he made to protect a tall church steeple. He installed a riser in the steeple to about three feet from the top. At the end of the riser he fitted a larger distributing nozzle. In the event of fire he connects a hose line to a connection outside. Ex-Chief Kenlon commented on this installation and remarked that it was the most practical way of fighting such fires.

Some humor was introduced by the question of Mr. Kenlon on how many sides to a fire. He said that the correct answer should be six as the lee and the windward sides must also be considered.

Gilbert H. Stetcher, of Hoboken, and Chief John J. Towey, of Newark, also spoke.

Those Who Attended the New Jersey Chiefs' Meeting

Ambrose, J. W., Chief, Dunellen.
Anthony, John, Bogota.
Babcock, Wm. P., Captain, Nyack, N. Y.
Baier, Edwin W., New Brunswick.
Baier, Geo. F., Commissioner, New Brunswick.
Bailey, Harold, Captain, Bloomfield.
Baker, A. E., Chief, Maplewood.
Balbach, Wm., Ex-Chief, Keansburg.
Beckert, E. G., West New York.
Beigner, C., Harrison.
Beyer, Robt., Ex-Chief, Keansburg.
Biggs, N. C., Dist. Mgr. American Express Co., Newark.
Bolden, Geo., Ocean City.
Bowker, R. H., Ex-Chief, Passaic.
Bullard, Wm. D., Ex-Chief, Haworth.
Buono, Chas., Hawthorne.
Burr, Chas. G., Bordentown.
Brady, Chas. J., Carteret.
Brotherton, D. A., Burlington.
Campbell, Harry, Chief, Irvington.
Callahan, A. T., Chief, Harrison.
Chandler, C. S., Fire Commissioner, Elizabeth.
Clark, A. S., East Rutherford.
Clark, James, Ex-Chief, East Rutherford.
Clark, M. M., Cedar Grove.
Clark, Wm., Foreman, Wallington.
Coburn, Thos., Harrison.
Conver, S. B., Chief, Ocean City.
Conway, J. M., Pyrene Mfg. Co., Newark.
Coss, Edgar R., Dover.
Courter, Wm. S., Captain, Montclair.
Cox, A. H., Succusanna.
Crawford, Wm., Chief, Cedar Grove.
Cullinan, John J., Chief, Morristown.
Davis, Ross B., Chief, Philadelphia, Pa.
Day, E. N., New Market.
Day, Gus L., Ex-Chief, Mendham.
Decker, D. C., Chief, Nutley.
De Young, C., Dunellen.
De Groot, John, Ex-Chief, Rutherford.
Dinesen, L. E., Dumont.
Dougal, C. H., Chief, Livingston.
Dougherty, Thos. F., Asst. Chief, N. Y. C.
Emery, Harold, Ex-Chief, Harding Township.
Engelbrecht, M., Bergenfield.
Erposito, Dominick, Chief, East Rutherford.
Finnerty, E., Chief, Bloomfield.
Fox, A. E., Harrison.
Francis, H. J., Chief, New Brunswick.
Freeland, J. J., Dover.
Friedel, Chas., Jr., Chief, Union City.
Ganther, A. L., Walter Kidde & Co., Inc., East Orange.
Gehrn, L., Ridgefield Park.
Gilday, J. J., Chief, Hoboken.
Gimbel, Phillip, Ex-Chief, Union City.
Gibbs, Jethro, Chief, Montclair.
Ginglen, Wm. S., Ex-Chief, Bordentown.
Gluner, Val., Ex-Chief, Carteret.
Gloor, Frank, Chief, Totowa Borough.
Green, F. M., Chief, Morristown.
Greenfield, Chas. W., Chief, Arlington.
Gerstung, Aug., Ex-Chief, Elizabeth.
Guire, John W., Long Branch.
Hand, Frank E., Chief, Fanwood.
Harvey Chas. A., Long Branch.
Hasselhuhn, Chris., Carlstadt.
Hayes, J. D., Chief, Millburn.
Herrmann, Leopold, Ex-Chief, River Vale.
Henison, E. O., East Rutherford.
Holdrun, G. S. M., River Vale.
Hora, Frank, Fire Commissioner, Linden.
Howe, Geo. L., Ridgefield Park.
Hutchinson, Jas., Asst. Chief, Totowa Borough.
Illig, R. F., Bergenfield.
Jessen, R. A., Ex-Chief, Keansburg.
John, Fred, Dumont.
Johnson, Chas. F., Harrison.
Keegan, James F., Supt. Salvage Corps, Newark.
Kerr, J. E., 1st Asst. Chief, Ridgefield Park.
Kenlon, John, Ex-Chief, N. Y. C.
Killman, Wm. F., Far Hills.
Kiseljack, L., Greystone Park.
Klepp, Waler H., Ex-Chief, Keansburg.
Klimbach, Thos. P., Chief, West Caldwell.
Koeber, Geo. E., Chief, Bloomfield.
Kolberg, Adolf, Ex-Chief, Dumont.
Krouse, Wm., Port Reading.
Knapp, F. H., Harrison.
Kiernan, Peter, Batt. Chief, Newark.

(*Continued on next page*)

Those Who Attended the New Jersey Chiefs' Meeting (Continued)

Kuss, Geo. G., Woodhouse Mfg. Co., N. Y. C.
Lane, Chas. B., Far Hills.
LePair, James, Hawthorne.
Leerburger, David, Fyre-Freez Corp., N. Y. C.
Lemort, Sylvan, East Rutherford.
Lippert, Chris., Ex-Chief, Weehawken.
Logan, Thos. P., Ex-Chief, Boonton.
Luse, J. F., Far Hills.
Mader, Edw. G., Park Ridge.
Maier, G., Carteret.
Maine, C. F., Fire Commissioner, Dumont.
Maheney, W., Ex-Chief, Boonton.
Marsten, J. M., Maywood.
Massey, C. E., Lumberton.
Matovskey, Anton, Deal.
Matthews, Wm. H., Ex-Chief, Orange.
McClain, Walter, Chief, Medford.
McAvery, Wm. L., American Express Co., N. Y. C.
McCool, G. M., Bloomfield.
McGinley, C. A., Chief, East Orange.
McIntyre, John A., Morristown.
Meister, John B., Mayor, Weehawken.
Meek, R., Bogota.
Meenan, Wm., Ocean City.
Meyers, John H. R., Madison.
Miller, Frank T., Chief, Linden.
Miller, G. A., Ex-Chief, Demarest.
Miller, Vincent T., Manasquan.
Mitchell, Geo. L., Ex-Chief, East Orange.
Mohr, Jos., Asst. Chief, Rahway.
Moore, Paul J., Newark.
Murphy, M. C., Kearney.
Murphy, Howard, Chief, New Vernon.
Nickerson, Chas. L., Wildwood.
Nugent, Richard A., Harrison.
Olrick, Sydnet T., Chief, Haledon.
O'Neill, Wm. F., Chief, Weehawken.
Opdyke, Harry, Commissioner, Fanwood.
Osborn, Arthur, Manasquan.
Osterman, Henry, Jr., Chief, Demarest.
Ortman, H. J., New Vernon.
Payne, H. L., N. Y. C.
Peary, G. H., Bogota.
Propp, Wm, Carteret.
Permack, Theo. M., Mt. Holly.
Peterson, Peter R., Port Reading.
Poland, C. B., Manasquan.
Presley, O. B., Chief, Long Branch.
Quinn, John, Commissioner, Harding Township.
Quinn, Richard D., Capt., Livingston.
Rapp, Chas. Wm., Carteret.
Rapp, Harry C., Ex-Chief, Carteret.
Reeve, LeRoy, Ex-Chief, Succusanna.
Reeves, Chas. R., Commissioner, Millburn Township.
Rhine, A. J., New Brunswick.
Ritzman, W. H., Chief, Rahway.
Schneider, B. E., East Rutherford.
Schutt, Peter N., Ex-Chief, Rutherford.
Schwark, Peter, Long Branch.
Schweitzer, Fred, Ex-Chief, Garfield.
Sistaro, John, Saddle River Township.
Shamburger, Rudolph, Garfield.
Sheehan, James J., West Orange.
Shine, James T., Commissioner, New Brunswick.
Smith, Wm. J., Fire Marshal, Bridgeboro.
Stager, H. H., Ex-Chief, Nutley.
Stalter, Norman, Park Ridge.
Stevens, James, East Rutherford.
Taft, J., Ex-Chief, East Rutherford.
Taylor, E., Newark.
Towey, John J., Chief, Newark.
Trowbridge, Fredk., Morristown.
Thompson, G. E., Mendham.
Thompson, James H., Bogota.
Van Ness, E., W. Caldwell.
Vogel, R. L., Ex-Chief, Keansburg.
Warren, C., Bogota.
Weaver, R. A., E. Rutherford.
Wick, L. W., Ex-Chief, Weehawken
Wolpert, N. N., Asst. Editor, FIRE ENGINEERING, New York City.
Wood, J. A., Bernardsville.
Yoma, James, Haledon.
Zanet, John, Chief, Clifton.
Zimmerly, O., Chief, Garfield.
Zullo, C. J., Chief, Port Reading.

H. F. J. Porter, Engineer, Dead

Holbrook Fitz John Porter, a well known engineer, and an occasional contributor to the columns of FIRE ENGINEERING, died at his home in New York City, on January 25, of pneumonia. Mr. Porter, who was 74 years of age, was Secretary of the National Museum of Engineering and Industry in New York City.

Mr. Porter was born in New York City on February 28, 1858, the son of General Fitz John Porter, a Civil War commander on the Union side and a veteran of the Mexican War. He was educated at St. Paul's School, Concord, N. H., and at Lehigh University, obtaining his Mechanical Engineering degree from the latter in 1878. He served as draughtsman, Engineer and Superintendent for iron and steel companies and served also as Engineer and Superintendent of the buildings and grounds of Columbia University. He also was Chief of the Machinery Department at the Chicago Exposition of 1893, and participated in the survey of Pittsburgh, Pa., for the Russell Sage Foundation.

Mr. Porter was a great advocate of the so called "horizontal fire escape"—a fire wall separating a building into two distinct parts, with fire doors for escape from one portion to the other. He was instrumental, in 1909, in bringing about the passage of the New York State law requiring a fire wall for horizontal fire escapes, which he had recommended as consultant to the State Factory Investigating Commission on Fire Hazards. In 1912 he organized the Efficiency Society.

During the World War he was adviser on employment efficiency to the Hercules Powder Company of Wilmington, Del. After the conflict he was consultant to 200 business concerns for the New Jersey State Chamber of Commerce on employment representation in industry.

He was a member of the American Society of Mechanical Engineers, the Aztec Club of 1847 (Society of the Mexican War) and Engineers Club of New York, and a director of the American Society for the Prevention of Blindness.

Mr. Porter is survived by his widow, a son, a daughter, and a brother.

Westchester Chiefs Discuss First Aid

A largely attended and interesting meeting of the Fire Chiefs' Emergency Plan was held at Fire Headquarters, Mount Vernon, N. Y., at 8:30 p.m., on January 18. Following the regular order of business, the President, Chief Arthur E. Steuhl, Eastchester Township, N. Y., called upon Judge Coop, of Bronxville, for a report of the Committee on Unemployment. Judge Coop said that some eighteen or twenty laws of interest to firemen had been drafted for presentation to the New York State Legislature, and among them was one taking care of the compensation of unemployed volunteer firemen. At present the unemployed fireman receives no compensation for injuries, but the new bill, which was sure to become a law, provides for a certain percentage of benefit.

Four new members of the Plan were elected from Larchmont, N. Y.

Treasurer Riviere reported a balance in the bank of $498.73.

A demonstration of an automatic fire alarm, known as the Fire Finder, was given by Mr. McDonald, of the Automatic Fire Detecting Company, of New York City. This is a foreign invention, based upon the action of heat-sensitive silver wires, which detect any sudden rise in temperature and sound an alarm.

Dr. William J. Fenton, head of First Aid Department of the National Red Cross then gave a very instructive talk on first aid to the injured. He said that he had spent a month in Westchester County in teaching classes of instructors. He told of the national work of his department in all parts of the United States, and emphasized the fact that firemen throughout the land were taking a keen interest in the acquiring the principles of first aid. Dr. Fenton stressed the importance of calling the doctor at once in case of injury. The first aider, he said, only filled the gap between the time of the injury and the arrival of the surgeon. In calling the doctor, it was important to tell where and who the patient is, the sex, the nature of the injury or ailment, and all the facts possible, so that the physician may come prepared to attend promptly to the case. He called special attention to the necessity for using half-strength iodine, or some other antiseptic, promptly, when the skin is broken.

Dr. Fenton demonstrated the approved method of stopping the bleeding from a blood vessel in different parts of the body, using Capt. Yates, Director, First Aid and Life Saving, Westchester Chapter, Red Cross, as the subject. The address was discussed by Ex-Chief Mulcahey, Yonkers, Chief Brennan, of Pelham Manor, and Captain Yates. A rising vote of thanks was given Dr. Fenton for his talk.

Mayor Bateman, of Mt. Vernon, extended a welcome to the members, and James W. Armstrong, Building Superintendent, Yonkers, read an interesting paper on the proposed building code for Westchester County. There was considerable discussion on the subject and, on motion of Judge Hoop, a committee, consisting of Chiefs Chambers, Brennan and Gibson, was appointed to cooperate on the matter.

On invitation of Chief Brennan, it was decided to meet next in Pelham Manor, on Wednesday, February 15, at 8 p.m.

Refreshments were served through the courtesy of the Mount Vernon Fire Department.

Bids presented for the construction of a new fire station in Charleston, S. C., were considered too high.

Chief Ralph J. Scott of Los Angeles has decided to give a special course in his Fire College covering high voltage lines. It will be given in cooperation with the Municipal Bureau of Power and Light. About three hundred officers will attend the course.

A firemen's school will be held in Manning, Ia., on October 18. Talks will be given by John Strohm, State Fire Marshall; Capt. Jurgeson, Capt. Linquist and Harry Corcoran of Des Moines, and others. Members of the Carroll Fire Department will assist the local firemen in conducting the school.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the month of January, 1933. These figures, compiled from telegraphic reports are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending January 31	Loss in Thousands of Dollars
Wells, Mich.—Yards of Stephenson Lumber Co. destroyed	100
Neligh, Neb.—Ewing public school destroyed	50
Framingham, Mass.—Twombly bldg. destroyed	65
Waupaca, Wis.—Plant of Cary Mfg. Co. destroyed	125
Sanger, Tex.—Business building destroyed	25
Jackson, Tenn.—Property of Askew Auto Storage Co. destroyed	40
Oakland, Cal.—Yards of Hogan Lumber Co. damaged	65
Niagara Falls, Ont.—Clifton House Hotel destroyed	400
Stratford, Ont.—Store of J. J. Crosier & Co.	65
Hope, Ark.—Store and office bldg. owned by R. G. McRea	25
Brigeport, Conn.—Bldg. of Union Light Co. destroyed	65
Philadelphia, Pa.—Plant of Jacob Stern & Sons destroyed	170
Shamokin, Pa.—Apartment property of Mrs. Mary Leskosky	25
Bristol, Conn.—Bridge Company factory damaged	45
New Bern, N. Dak.—Vogue store destroyed	45
Fort Worth, Tex.—Plant of City Packing Co. destroyed	45
Shawsville, Va.—Shawsville Bank and adj. store property	25
Smithfield, N. C.—Methodist Church destroyed	35
Washington, N. J.—Apartment property owned by Andrew Weiss	25
New Philadelphia, Ohio—Roob bldg. and adj. property	25
Bevier, Mo.—High school bldg. destroyed	40
San Francisco, Cal.—Macbeth Apts., Geary St., damaged	80
Chicago, Ill.—Stock of Pyratone Golf Supplies Corp	65
Sheboygan, Wis.—Club Arabia, Calumet Road	35
Winnipeg, Man., Can.—Cadomin bldg. damaged	25
Sydney, N. S.—Globe Steam Laundry bldg. destroyed	40
Vallejo, Cal.—Elks Club bldg. destroyed	75
Chetek, Wis.—Several stores destroyed	30
Magazine, Ala.—Plant of Lindsey Lumber & Export Co.	80
Mobile, Ala.—Plant of Mobile Ship Chandlery Co. destroyed	65
Crossfield, Alberta—Elevator of Midland & Pacific Grain Corp.	35
Maywood, Ill.—Lido Theatre damaged	45
Kenosha, Wis.—Block Bros. dept. store damaged	70
Kirkville, Iowa—Kirkville bank and adj. property	40
Minneapolis, Minn.—Coal yard of Illinois Cooperage Mfg. Co.	200
Bradenton, Fla.—Bathing pavilion of R. M. Bouware destroyed	30
Sunbury, Pa.—Several business buildings destroyed	50
E. St. Louis, Ill.—Lumber yards of Illmo Lumber Co.	100
Marion, Ind.—Whse. of Standard Glass Co. destroyed	50
Wilmot, Wis.—High school bldg. destroyed	45
E. Norwich, N. Y.—Barns on Pond Acre farm destroyed	25
Boyceville, Wis.—Four business establishments destroyed	45
San Jose, Cal.—Plant of Herbert Packing Co.	40
Detroit, Mich.—Plant of Keystone Refining Co. damaged	80
Stockton, Cal.—Plant and whse. of Stockton Soap Co.	45
Mercer, Wis.—Main lodge on Eitel estate, Owl Lake	25
Sparta, N. C.—Allegheny County Court House, adj. property	170
Shreveport, La.—Property of Cedar Grove Refinery Co.	45
Mount Pleasant, Mich.—Bldg. of Central State Teachers College	65
Smithfield, N. C.—Property of Reid-Bridgers Motor Co. destroyed	25
Washington, D. C.—Interstate Commerce Commission bldg. damaged	45
Corinth, Ky.—Business property damaged	65
Madison, Ind.—Whse. of Jones & Son, adj. dwelling	50
Rocky Mount, N. Car.—Seed house of Southern Cotton Oil Co.	25
Albany, N. Y.—Phillips Furniture whse. damaged	25
Lake Forest, Ill.—Residence of Mrs. Chas. W. Folds destroyed	65
Kingman, Ariz.—Powerhouse and water plant destroyed	45
Baring, Me.—Sawmill of Eastern Pulpwood Co. on St. Croix River	25
Wichita Falls, Tex.—Stringer estate property	30
New Haven, Conn.—Adaskin Furniture Co. store, adj. property	80
Carlisle, Pa.—Business and apt. bldg. on Hanover St.	125
Milledgeville, Ga.—Reed dept. store, other business property	25
Louisville, Ky.—Plant of Consolidated Poster Advertising Co.	25
Conimicut, R. I.—Woodbury Union Church destroyed	25
Toledo, Ohio—Plant of Silica Stock & Slaughter Co., 17 mi. west	65
Baltimore, Md.—Fifth Regiment Armory destroyed	800
Albany, Ore.—Albany Elks Temple, adj. property	80
Lexington, N. C.—Plant of C. M. Wall & Son destroyed	25
Montreal, Que.—St. Louis de France Church destroyed	350
Plymouth, Mass.—Property of Mrs. G. F. Washburn, manomet Bluffs	45
Freeport, N. Y.—Business property destroyed	80
Ozone Park, N. Y.—Plant of Adelphi Paint & Color Works	25
Napa, Cal.—Manchester building destroyed	35
Fannett, Tex.—Property of Gulf Production Co.	40
El Reno, Okla.—Criterion Theatre destroyed	250
West Newton, Mass.—Residence of Dr. H. Ulrich, destroyed	25
Omaha, Neb.—Browning-King store destroyed	350
Farmville, Va.—Mills of Bliss Bros. destroyed	75
Paducah, Ky.—Whse. on U. S. engineer's office reservation	65
Washington, D. C.—McMahon Hall at Catholic University	25
Freemont, Neb.—Plant of Western Seed & Irrigation Co.	65
Butler, Pa.—Business property of D. Dougal damaged	80
Monroe, Mich.—Plant of Consolidated Paper Co. damaged	25
Merced, Cal.—Buffman mansion destroyed	80
Grafton, Cal.—R. R. station and adj. business property	80
Williamsport, Pa.—Several business establishments	25
Lockport, N. Y.—Barns on Michael Gross farm, near Streeters Corners	30
Bloomsburg, Pa.—Grand Union Tea Co. and D. Mayer store	40
Waldron, Ark.—Property of Burnett-Ingram Lumber Co.	35
Chicago, Ill.—Property at 174-178 West Lake Street destroyed	200
Rock Island, Ill.—Several business establishments damaged	125
Los Angeles, Cal.—Packing plant of Van Camp Sea Food Co.	80
Lemmon, S. Dak.—Eight buildings in business district	125
Flint, Mich.—Woolworth store and adj. property	125
Waltham, Mass.—Mercantile Building on Main St.	25
Malone, N. Y.—Howard block destroyed	80
Buffalo, N. Y.—Bldg. occupied by Catholic Union-Times	65
Raton, N. Mex.—Two business buildings damaged	80
Walpole, Mass.—Delmonico Inn owned by S. Zimballi	35
Newport, Vt.—Camp Elizabeth Hotel, Lake Memphremagog	45
Ambler, Pa.—Residence of Major D. Buckley, Skippack Pike	45
New Brunswick, N. J.—Cross Country Riding School, Franklin Township	25
Ripley, Tenn.—Berg & Schaefer dept. store destroyed	30
Muskogee, Okla.—Plant of Muskogee Mill & Elevator Co.	30
Lexington, Ky.—Central Christian Church damaged	30
Argonne, S. Dak.—Argonne Consolidated School bldg.	80
San Jose, Cal.—Blum store and Raymond Hotel destroyed	165
Ticonderoga, N. Y.—National Bank block damaged	25
Burlington, N. J.—Public Service generating plant damaged	150
Allendale, N. J.—Property of N. De Mauriac destroyed	50
Springfield, N. J.—Chateau Baltusrol, J. Donovan, owner	25
Johnstown, Pa.—Property of Penna. R. R. Co.	40
Hackensack, N. J.—Business and apt. bldg., 257 Main St.	25
Lewiston, Me.—Business property owned by J. McGillicuddy	65
Raymond, Wash.—Mill of Sun Lumber Co., destroyed	65
Sheridan, Wyo.—Ranch home of Harold Hillman, 12 mi. south	45
Carthage, S. Dak.—Farmers State Bank Bldg. damaged	25
San Francisco, Cal.—Stock of and bldg. occupied by J. L. Stuart Co.	200
Vernon, Cal.—Yard and mill of E. J. Stanton & Sons Lumber Co.	150
Halifax, N. S.—Furniture store of Gordon & Keith	25
Marathon, Wis.—Silverman store, adj. property	25
St. Joseph, Mo.—Orpheum Theatre bldg. destroyed	30
Harrison, N. J.—Hantman's Hall, Harrison Ave., damaged	45
St. Johnsville, N. Y.—Property of Adam Firsching at Yosts	25
Smethport, Pa.—Property in business section	350
Boston, Mass.—Rosenbaum bldg. damaged	45
Sioux Falls, S. Dak.—Store of Home Furniture Co.	25
Eastchester, N. Y.—Bella Vista apartments damaged	50
Jacksonville, Fla.—Shad & Tucker Jewelry Co. store	25
Chicago, Ill.—Krumm department store destroyed	25
Stoneham, Mass.—Willis Block damaged	30
Kansas City, Mo.—Property of Kathrens Moving & Storage Co.	40
Billings, Mont.—Whse. of Sioux City Seed Co. damaged	125
Harrisonburg, Va.—Elkton Flour Mill destroyed	25
Seattle, Wash.—Meves bldg., damaged	35
Forty Fort, Pa.—Property of Albert Bros. destroyed	25
Lyndon, Vt.—Three dwellings and adj. property	25
Kinston, N. C.—Montgomery Ward & Co. store, damaged	45
St. Louis, Mo.—Shultz Folding Box Co. property	50
E. Braintree, Mass.—Property of Cities Service Refining Co.	65
Washington, D. C.—Czechoslovakian Legation damaged	45

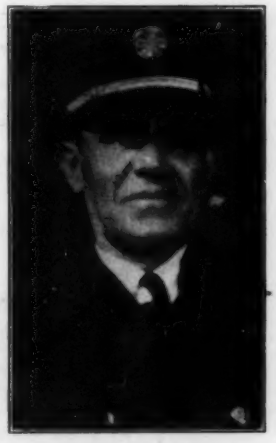
Fire Loss Correction

Chief Harry Hutton of North Salem, Oregon, has advised us that the fire loss items listed for his city in the January issue was in error. The loss instead of being $150,000 as stated, was but $56,050.

Travers, New Chief of Baltimore

Howard Travers, Deputy Chief No. 2 of the Baltimore, Md., Fire Department, was named Chief to succeed Chief August Emrich who resigned on November 15.

The new Chief was born May 20, 1875 in South Baltimore. In his youth he worked in the Woodberry cotton mills and at sea in coastwise trade. He joined the Fire Department April 29, 1897. On February 4, 1905, Travers was promoted to Lieutenant; Captain on January 1, 1908; Battalion Chief, August 1, 1921 and Deputy Chief, June 7, 1928. Chief Travers has had charge of the Fire Prevention Bureau as well as the department's school for officers.



Chief Howard Travers

Chief Travers owes much to former Chief Emrich. About twenty-five years ago when Emrich was a Deputy Chief and Travers a Lieutenant, Travers was overcome on the fifth floor of a burning building. He was found by Chief Emrich and dragged to safety. The new Chief said that there was little he could do than to pattern his policy after his predecessor.

Chief Travers is married and has five children.

Livingston, N. J., has elected Clarence H. Dougal for his fifth consecutive term as Chief. He has been department head since April, 1929.

A meeting of the directors and members of the Legislative Committee, Wisconsin Fire Chiefs' Association was held in the office of Chief Charles W. Brandt, Sheboygan.

Chief Gillen of Racine, Wis., Dead

Clarence E. Gillen, a member of the Racine, Wis., Fire Department for thirty-four years and Chief for ten years, died recently of heart disease.

The Late Chief C. E. Gillen

He joined the department as a call man July 8, 1898, and the following year was assigned as a regular driver. He was appointed Captain, January 1, 1913; Assistant Chief, July 13, 1922, and Chief, December, 1922.

Chief Gillen was a trustee of the Wisconsin State Fire Chiefs' Association and he served as President of the Wisconsin Paid Firemen's Association. He is survived by a daughter.

The Mayor of Racine issued a proclamation urging all citizens to visit the lobby of the city hall to view the body as it rested in state.

Lindsey Resigns

John F. Lindsey, Chief of Fire Department, Spokane, Wash., resigned February 1, at the age of sixty-five. He has been a member of the department for forty-two years. Chief Lindsey has been head of the department since May, 1931, and a member of the service since July, 1891.

Cleveland Rescue Squads Successful

Persons for whom it is found necessary to secure emergency aid from the Cleveland Fire Department have a fifty per cent or better chance to pull through, according to the annual Fire Department Report. The three Rescue Squads of the city were called upon to save the lives of 244 persons —of this number 110 lived and 134 died. As the squads, in most cases, are called as a last resort, the record is considered a noteworthy one.

Cases of asphyxiation were the most common and fifty-five such calls were answered. In forty heart attack cases the squads saved eleven lives. The list of cases treated included apoplexy, asthma, burns, bronchitis, convulsions, drownings, diabetes, electric shocks, hemorrhages, hysteria, indigestion, meningitis, poisoning, pneumonia, attempted suicides, spasms, still-born babies, whooping cough and shock.

Each squad consists of fourteen men. Each truck carries a life saving bag, grappling hooks, life nets, bar cutters, rubber gloves for handling high tension wires, wading boots, wrenches, fire extinguishers, saws, hammers, levers for opening locked doors, stretchers, block and tackle, hot pads, blankets and special tools. Each member is trained in the Schaeffer method of artificial respiration. Most of the members are expert swimmers and have passed the Red Cross life saving tests.

A New Fire-Fighting Idea

While it has been known for some time that gasoline and water do not mix, it remained for Chief Michael Mahoney, Kansas City, Mo., to employ this principle in extinguishing a threatening oil blaze in an apartment district.

The contents of a railway tank car holding 16,000 gallons of gasoline were being drained into a storage tank. A valve at the bottom of the car stuck. Gasoline flowed along the ground to embers of a fire started by a night watchman. Fire spread back along the small gasoline flow and both chemicals and water streams failed to halt the blaze.

When Chief Mahoney arrived he instructed firemen to climb atop of a nearby garage and direct a small flow of water into the tank car through an open manhole of the car. The water sank to the bottom of the tank car as it was heavier than the gasoline. Water instead of gasoline then flowed through the defective valve. Gasoline previously freed burned itself out and enabled the defective valve to be repaired.

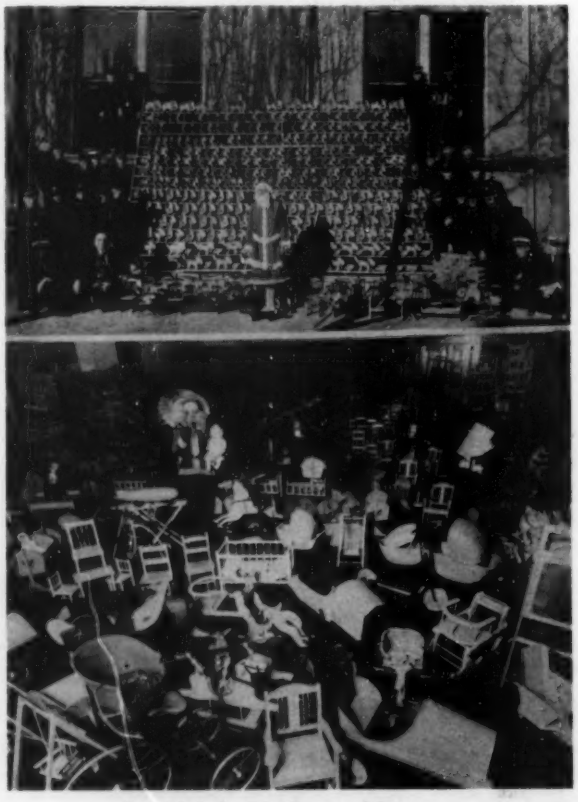
Firemen Assist Santa Claus

Starting in November, the entire Fire Department of Albuquerque, N. M., devoted their spare time to the construction of toys for Christmas distribution. Wood working machinery was purchased with the proceeds of a dance held in March. Some of the material used was donated.

The toys constructed consisted of elephants, horses, zebras, mules and dogs on wheels, small wooden wagons, chairs, wooden walking dolls, wooden walking frogs, doll beds and small tables. A local tin shop donated tin airplanes which the firemen painted. In all 779 toys were made.

The larger part of these toys were turned over to the Bernalillo County Charity Commission, American Red Cross and the Salvation Army. Firemen distributed 214 toys to needy children. Mayor Clyde Tingley gave a candy bar, an orange and pop corn ball to each child who came to the fire station for a toy.

Firemen of Wilkes-Barre, Pa., repaired toys that were left at the fire station. The rejuvenated toys plus a number that were made by the firemen were distributed to the needy children. In 1931 the Fire Department collected and fixed about 5,000 toys.



Toys Made by Two Groups of Firemen

Upper, some of the toys made by Albuquerque, N. M., firemen. In the bottom row are Chief W. A. Westerveld, Mayor Clyde Tingley, Santa Claus, Asst. Chief Milton Grande, Capt. Pat Kane; second row, Lieut. Carpio Martinez, R. S. Votaw, W. L. DoBell, E. D. Snapp, Harry Fletchall, Lieut. Joe Silva, Fred Brown, Ed Lucero and Ed. Horn; third row, W. Prokosh, Elmer Crist, Capt. Harry Savage, Lieut. Jack Nabstedt, Simon Seligman, L. W. Walsh, L. L. Fredericks; fourth row, Joe Torres, Pete Granucci, Lieut. Henry Baca; on ledge, Thomas Morgan, Pedro Gutierrez, Lieut. C. G. Selva and Reno Stevleton. The other photograph shows some of the toys repaired and made by Wilkes-Barre, Pa., firemen.

Beverly Hills, Cal., has opened a new fire station costing $50,000. It was designed to harmonize with other buildings in the civic center. The station is equipped with a drill tower and gymnasium. Chief Canfield, head of the department, will complete his seventh year in that office.

• • • A.D.T.

THE ARROW—the A.D.T. symbol —represents speed and directness.

Fire chiefs everywhere know this symbol and endorse the speedy and dependable fire detecting and reporting systems of the American District Telegraph Company. They recommend them because they are valuable contributions to the effectiveness of fire-fighting.

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EVERY one of our badges has in it the finest metal and workmanship that over fifty years of experience can give you.

Thousands of firemen who have worn them know that they look better and last longer than any other badge. Let us suggest before you order any, that you write for a Braxmar catalog. It's yours for the asking. When you get it, select any one of the many fine designs we have in stock and order direct from us. That's the way to make sure of getting the finest badge your money can buy.

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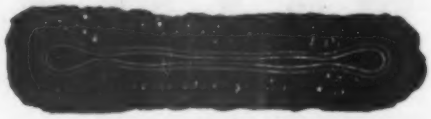
BRAXMAR BADGES
Standard for Over Fifty Years

Bi-Lateral Fire Hose



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A twenty per cent reduction in price now enables you to own one of the famous Type "E" Federal Sirens. This Siren is known for its tone carrying quality and beauty in design. What is more, you can have it for 15 days' FREE TRIAL. We will furnish it complete with cord, switch and mounting bracket for fifteen days' free trial. Merely tell us you want it and we will ship it immediately. After 15 days' free use either return it or mail us your check. This offer is made at no expense to you.

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Clay Automatic Door Opening Devices for Fire Station Doors Opening either In or Out. Save valuable minutes in getting to fires. Send for Bulletin.

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1000 gallons pumping capacity.

UNSURPASSED IN
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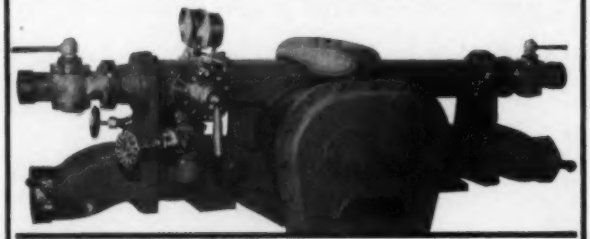

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Send for new catalog completely illustrating and describing this better fire apparatus

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EDDY Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

Write for the Facts

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James B. Clow & Sons, Chicago Agents

Piggott Chief of Rome, N. Y.

Harry W. Piggott has been appointed Chief of the Rome, N. Y., Fire Department to fill the vacancy caused by the resignation of Chief George M. Bower on October 1. He has been Acting Chief since Chief Bower resigned.

Chief Harry W. Piggott

Chief Piggott was appointed to the department on December 19, 1913. He was promoted to Lieutenant, August 15, 1915; Captain on November 1, 1919, and First Assistant Chief on February 14, 1927. From point of service, he is one of the oldest members of the department.

He was born in Rome and has always lived in that city.

William M. Campbell, Second Assistant Chief, will serve temporarily as First Assistant Chief until further action is taken by the Commissioner.

Coal Fire

A block in the Harlem section of New York City was destroyed when a strong northeast wind spread a blaze that razed a four-story coal pocket, an adjoining two-story building, and a two-story brick building of a paper stock yard. Burning embers were carried into the densely populated area but firemen were able to confine the fire to the original block. Four alarms were sounded bringing Assistant Chief Thomas F. Dougherty, twenty engine companies, five ladder companies, a fireboat and a large amount of auxiliary apparatus.

Chief W. A. Coulter Dead

William A. Coulter, Chief of the Framingham, Mass., Fire Department, died on January 14 at the age of seventy-three years. He retired from the Boston Fire Department in 1917 as District Chief and later was appointed Chief of the Framingham department.

He was born in Boston and entered the fire service in 1882. He rose through the ranks of Lieutenant and Captain to District Chief in which position he was stationed for some years at the Mason Street fire house. After his retirement he became a civil service examiner and had charge of the organization of fire protection at the army base in South Boston. He was made permanent Chief in Framingham on May 1, 1922. He was a member of Siloam Lodge, I.O.O.F.

Funeral services were held in the Waterman Chapel in Roxbury with the Rev. DeWitt Dowling, of the Church of the Redeemer, South Boston, officiating. Among those at the funeral were Chief Henry A. Fox, of the Boston Fire Department; Ex-Chief Daniel F. Sennott, Boston; Supt. Peter E. Walsh, Boston Protective Department; George L. Fickett, Superintendent of Boston Fire Alarms and many officials of the Boston, Framingham, and other nearby Fire Departments. The Chief is survived by his sister, Miss Margaret Coulter and by a nephew, William Coulter. He had been ill for several months.

HARRY BELKNAP.

Rhode Island Chiefs Elect Officers

Chief Frank Charlesworth of Providence, R. I., was re-elected President of the Fire Chiefs' Club of Rhode Island at the annual meeting held in Providence, January 12. This marks his seventh term for he has been head of the club since it was organized in 1927.

The other officers are Chief Augustin J. Cote, Woonsocket, First Vice-President; Chief Elmer R. Capwell, Anthony, Second Vice-President; Ex-Chief A. Robert Black, North Providence, Secretary; Ex-Chief Arthur J. Billinge, Norwood, Treasurer; Board of Directors, Eugene Parenteem, West Warwick, Ex-Chief Charles Rounds, Warren, and Deputy Chief John H. Fischer, Providence.

President Charlesworth read a paper on the hazards of fuel oil in the homes and he made suggestions for eliminating many of the present risks. Chaplain Morton read a paper describing the greatest explosion in the history of the world, the one that occurred in Halifax, N. S., harbor on December 6, 1917.

The Legislative Committee was instructed to present four bills of interest to Fire Departments to the General Assembly. They are an act to regulate the installation of oil burners in dwellings and the use and storage of fuel oil; an act to make it compulsory on the part of towns of the state to appropriate a sufficient sum for fire protection; an act that would make it compulsory on the part of property owners to make a report to Chiefs of Fire Departments on the cause and circumstances of fires in buildings; an act to assist widows and orphans of firemen killed in line of duty.

Alfred N. Miner of the Massachusetts Safety Council explained the various sections of the proposed law in that state that will regulate the use of fuel oil in dwellings.

The Secretary's report showed a membership of 237. The banquet and installation of officers will be held on February 16 in the Narragansett Hotel, Providence.

Device to Prevent False Alarms

A device has been developed by the P-B Fire Equipment Company of St. Louis, Mo., which will attach a metal cuff to the arm of a person turning in a fire alarm. This cuff can only be released by members of the Fire Department.

The invention is marketed under the name of "The Silent Sentinel." The manufacturers claim that it can be installed on any fire alarm box in use at the present time without changing the system.

In sending in an alarm from a box equipped with "The Silent Sentinel," the sender inserts an arm through a cuff at the bottom of the fire alarm box and he turns a dial to the right. This sends in the alarm. At the same time the cuff locks on to the arm of the sender and is released from the box. That person must wait until the fire company arrives to be freed from the attachment. The cuff is too prominent to avoid attracting the attention of one passing by.

Turning in an Alarm With the New Device

Left, girl sending in an alarm by inserting hand through cuff and turning the dial. Right, cuff locked on girl's arm after the alarm is sent.

Jesse A. Fisher of Annapolis, Md., was elected President of the Maryland State Firemen's Association at the convention held in Frostburg. Other officers elected are Henry Hedemann, Sparrows Point, Senior Vice-President; A. A. Phillips, Hampstead, First Vice-President; E. B. Miller, Sr., Sparrows Point, Second Vice-President; George R. Lindsay, Hagerstown, Secretary; Frank C. Ort, Midland, Treasurer; B. H. Ford, Crisfield, Trustee. Chief Edward H. Warr of the Baltimore Salvage Corps, gave an interesting talk on salvage work. The 1933 convention will be held in Westminster.

The Maine Forest Service prepared a tabloid newspaper and distributed to every household in the Katahdin district, in an effort to reduce the number of fires in that area. This four-page tabloid paper contained many illustrations and stressed the importance of Maine residents protecting their forests—the chief resource of the state. Articles pointed out how fires would ruin the paper mills, destroy animal and fish life, dry up waterways and burn up thousands of acres of timber. The department has long conducted educational campaigns through the medium of posters, billboards, display advertisements, calendars and so forth.

FIRE DEPARTMENT ACTIVITIES

Firemen of La Crosse, Wis., volunteered to take a ten per cent cut in their pay.

Titusville, Pa., voted to consolidate the department into one central station as an economy move.

Portsmouth, Va., has abandoned the South Side fire station. The men and apparatus will be shifted to new locations.

Shadyside, Ohio, is considering the purchase of new fire apparatus. A recent fire brought out the need of new apparatus.

A parade and banquet marked the opening of two fire stations at Reseda and at Canoga Park in San Fernando Valley, Cal.

Kentucky had fire losses in 1932 totaling $1,846,888. Of this amount, $1,141,343 was for damage to buildings and $705,545 for the contents.

Fire apparatus and hose were destroyed when the building in Glidden, Ia., in which they were kept was burned. It is believed that an overheated stove caused the fire.

Frank J. May, Chief of the Mansfield, Ohio, Fire Department for three years, has resigned. He is Vice-President of the Ohio Fire Chiefs' Association.

The Council of Los Gatos, Cal., is considering a plan to have a state fire truck stationed here for the winter to protect the foothill and mountain area.

E. C. Kuehner, Chief of Chehalis, Wash., was elected President of the Southwest Washington Firemen's Association, at a meeting held in Aberdeen.

Regardless of rank, members of the Lakewood, Ohio, Fire Department will receive a flat cut of $450 per member. The pay of other city employees was also cut.

A number of Chiefs in West Virginia are advocating a bill now before the legislature which will provide for a two per cent tax on fire insurance written in the state.

Chief Ralph J. Scott, Los Angeles, Cal., has appointed fifteen men on the civil service list as firemen to fill vacancies. The commission approved the appointments.

Port Monmouth, N. J., has awarded a contract for the construction of a two-story tile and stucco fire house. The building will cost $12,000 and will be finished by spring.

City officials of South Bend, Ind., were guests of the firemen at a dinner arranged to mark the addition of a 500-gallon pumper. Chief Roy A. Knoblock acted as toastmaster.

Officials of Cleveland, Ohio, are considering a ten per cent cut in the salary of firemen. The Mayor has ordered a twenty-six-day payless vacation for members of the department.

Morgantown, W. Va., is constructing a four-story structural steel drill tower to be used in connection with the state fire school and for training members of the local fire department.

Fire officials of Mamaroneck, N. Y., are advocating a loud-speaking fire alarm system to be installed in the fire station as a means of avoiding the confusion accompanying the sounding of alarms.

A new fire station has been opened in East Jaffrey, N. H. As part of the ceremonies, there was a band concert, and the fire station remained open for inspection throughout the day and evening.

Twenty-one members of the Fire Department of Bridgeport, Conn., including four captains, were transferred by Chief Thomas F. Burns as an economic move. One fire station has been closed.

Wilkes-Barre, Pa., was awarded first place for the state for its activities during fire prevention week by the National Fire Protection Association. This is the first year that the city entered such a competition.

The entire off-platoon of the Jamestown, N. Y., Fire Department attended the funeral services of Mrs. Jennie R. Beatty, mother of Chief Clifton J. Beatty, who died recently. She was seventy-three years old.

Two Rivers, Wis., has opened its new fire station. The first floor contains the apparatus room, supply room, hose room, room for the fire alarm apparatus, private room or living quarters for the force, and the Chief's office and bed room. In the general quarters the firemen have a lounge, dining room, kitchen, toilet and closet. A large dormitory to serve two companies takes up most of the second floor.

Chief Charles W. Ringer of Minneapolis, Minn., has announced that sixteen firemen are to be discharged as an economy move, including eight men who have been in the department for twenty years or more.

The Fire Department of Painesville, Ohio, received a $25,000 bequest from the estate of one of the town's former residents. The bequest to the department will take effect upon the death of all beneficiaries of the estate.

Members of the Carroll, Ia., Fire Department gave a farewell dinner to Capt. Jurgeson of the Iowa Insurance Bureau who had charge of drills throughout the state. Capt. Jurgeson returns to his former post in the Minneapolis Fire Department.

Chief John J. Schwartz, who retired as head of the Kenosha, Wis., Fire Department on January 1, was presented with a gold chief's badge. He was chief for the past fifteen years and a member of the department for twenty-seven years.

Firemen of Middletown, Ohio, are changing equipment on the various fire trucks so that each piece of apparatus will have its equipment arranged in the same manner. This new plan is being followed so that the work of the firemen will be simplified.

The New Britain, Conn., fire board adopted a return to the one platoon system, and a stagger system of having men take one week off without pay in every four, as an economy move. This move is expected to result in a saving of $38,000 a year.

The Court has refused to halt the purchase of fire apparatus by the town of Harrison, N. Y. At a special election the town voted to purchase fire apparatus for $12,000. The Chairman of the town board refused to sign a purchase contract for the engine.

Seven firemen of Williamsport, Pa., were injured when apparatus on which they were responding to a fire collided with a coal truck. Chief Michael E. Clark, also on the way to the fire, passed the spot after the accident, and supervised the care of the injured men.

An offer has been made by the Fire Department of Burlington, Ia., to inspect any residence in the city without charge. The department started an inspection of buildings in the down town district. Inspection of residences has not been made compulsory.

Members of the New York Fire Department have been directed to make an inspection of tailor shops to see if dry cleaning is being done with the use of volatile liquids in violation of the ordinances. Many tailor shops are located on the street floor of tenement buildings.

According to the President of the Civil Service Commission of Minneapolis, Minn., no one will be certified as Chief of the Fire Department who is over fifty years old. The city has been having a difficult time selecting a successor to Chief C. W. Ringer who will retire in April.

A bill will be introduced in the Iowa legislature providing for state aid for cities which furnish fire protection to state owned institutions. Council Bluffs adopted a resolution supporting the bill. If this bill is passed, Council Bluffs will have an additional fire truck and eight extra firemen.

W. T. Filmer, Chairman of the Chamber of Commerce of Youngstown, Ohio, has urged the Council to take steps to build a new fire station in the downtown section of the city. Mr. Filmer's recommendation is in support of the request of Chief Henry Callan that such a building is needed.

John E. Cater, Chief of Galesburg, Ill., department for twelve years and a member of the Fire Department for thirty-eight years, died at his home on January 9 following a heart illness of several months. He was born in Barnesville, Ohio, March 11, 1869. He is survived by his widow, four sons and a daughter.

Frank G. Henry, State Fire Marshal of Ohio, reported that seventy-six persons were convicted of arson in Ohio during the past year. The state marshal and his assistants investigated 1,353 fires and arrested 238 persons. The cost of operating the division was $101,789, much less than the amount expended in 1931 and 1930.

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CHIEFS who have used SAMBO are for it, 100%. It's nothing to wonder at, either, for a little box of SAMBO puts out a chimney fire in a few seconds. Nothing to it—just scatter a boxful over the embers in the stove and your chimney fire is out in a jiffy.

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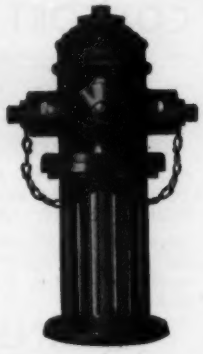

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FIRE departments should demand hydrants especially designed for fire service. The CRISPIN hydrant was designed to help you fight fires more efficiently, Chief. Before you replace old hydrants or install new ones, we suggest you let us send you our folder which completely describes CRISPIN hydrants and just why you should recommend them for your city or town.

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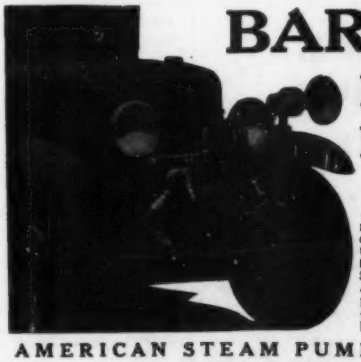

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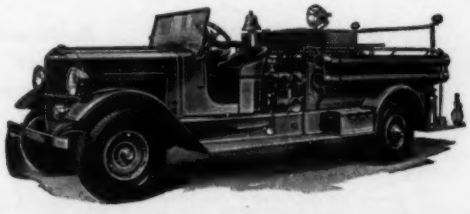

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COMFORTABLE AS YOUR OLD FELT HAT; WON'T SHAKE OFF

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The FINEST LARGE NOZZLES and DECK GUNS are "Made by MORSE"

Practically every well known Fire Boat in service in this country today is equipped with MORSE "Invincible" Nozzles, many pieces of fire apparatus are also equipped with these exceptionally fine nozzles. They are the result of nearly a hundred years of experience in producing nozzles that are a lot better than the general run of fire nozzles.

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Saves time - *and costly hose*

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Complete information and Prices on request.

It's often necessary to move apparatus at a fire. Automobile traffic hates to be held up by a line of hose stretched across the right of way.

Why ruin your hose by driving over it? Or waste valuable time cutting off and disconnecting?

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Over 1,300 sets of Anderson-Hale Fire Station Door Openers are in successful use. They provide simple, durable, quick-acting doors that open inward. No obstruction to sidewalk. Attractive in appearance, cannot sag, closes tight, excludes cold, gives clear opening. Opens from driver's seat or from floor. Many repeat orders from users.

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Mfrs. Motor Fire Equipment and Fire Supplies
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Whenever you are in the market for anything in the line of fire equipment, it will pay you to get our quotation before you buy.

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is a portable turret pipe that can be used on the ground or mounted on the apparatus. This photo shows our three-way gun used on the ground, connected to two lines of hose. This gun may be furnished with either two-way, three-way or four-way Siamese, as desired.

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PROPOSED IMPROVEMENTS

Clifton, N. Y.—Clifton Vol. Fire Dept. to purchase new pumper and other fire equipment.

Darien, Conn.—Fire Commrs. instructed by Board of Finance to purchase new pumper for vol. fire dept. at cost of $6,500.

Bellefontaine, Ohio—Fire Chief H. S. Blair recommended in annual report the purchase of a service or aerial ladder truck and fire hydrants.

North Adams, Mass.—Fire Chief John E. Saulnier recommended in annual report the establishment of new fire station in western end of city.

Shamokin, Pa.—Borough Council contemplating purchase of new fire apparatus to replace equipment in charge of Rescue Fire Co.

Hoboken, N. J.—Fire Chief John J. Gilday in annual report recommended erection of new fire station on property of Engine No. 2, Park Ave.

Crestline, Ohio—Council passed ordinance for bond issue to the amount of $4,500 for purchase of fire truck and necessary equipment.

Zanesville, Ohio—Construction of two new fire stations to replace Central and Putnam structures recommended by Fire Chief Scott Power in his annual report.

CONVENTION DATES

Feb. 13—POLICE AND FIRE CHIEFS' CLUB—MONTREAL AND DISTRICT—Regular Meeting, Windsor Hotel, Montreal, Can. Secretary-Treasurer, Chief Robert Harrington, Fire Department, McColl-Frontenac Oil Co., Ltd., Windsor Hotel, Montreal.

Feb. 16—FIRE CHIEFS' EMERGENCY PLAN. Monthly Meeting, Fire Headquatrers, Pelham Manor, N. Y. Secretary-Treasurer, Capt. Eugene Riviere, Fire Headquarters, Larchmont, N. Y.

Feb. 16—CENTRAL WESTERN FIREMEN'S ASSOCIATION. Monthly Meeting, Miamisburg, Ohio. Secretary, A. Hertzel, Miamisburg.

May—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 4th Annual Convention, Easton, Md. (Exact date to be decided later.) Secretary, A. C. Bailey, Laurel, Del.

May 23-26—IOWA FIREMEN'S SHORT COURSE. 9th Annual Course, Ames, Ia. Chief L. R. Morris, Ames, Ia.

May 24—IOWA FIRE CHIEFS' ASSOCIATION. 5th Annual Meeting, Ames, Ia. Secretary-Treasurer, Chief L. R. Morris, Ames.

June—EASTERN ASSOCIATION OF FIRE CHIEFS. 6th Annual Convention, Harrisburg, Pa. (Exact dates to be decided later.) Secretary, Chief F. E. Soulé, Coatesville, Pa.

June—NORTH DAKOTA FIREMEN'S ASSOCIATION. 49th Annual Convention, Carrington, N. Dak. (Exact date to be decided later.) Secretary, H. L. Reade, Bismarck, N. D.

June—SIX COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Carbondale, Pa. Secretary Fred Zeiser, Shamokin, Pa.

June 5-7—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 11th Annual Convention and Fire College, Las Cruces, N. M. Secretary-Treasurer, T. A. Rosenwald, Albuquerque, N. M.

June 6—TEXAS STATE FIREMEN'S AND FIRE MARSHAL'S ASSOCIATION. 7th Annual Convention, Corpus Christi, Tex. Secretary-Treasurer, Olin Culberson, Edna, Tex.

June 8—NORTHERN INDIANA INDUSTRIAL AND VOLUNTEER FIREMEN'S ASSOCIATION. 28th Annual Convention, Bluffton, Ind. Secretary-Treasurer, G. W. Darr, Columbia City, Ind.

June 8-9—SOUTHEASTERN ASSOCIATION OF FIRE CHIEFS. 6th Annual Convention, Savannah, Ga. Secretary-Treasurer, John L. Miller, Concord, N. C.

June 12-14—KANSAS STATE ASSOCIATION OF FIRE CHIEFS, STATE FIREMEN'S ASOCIATION AND FIRE SCHOOL. Respectively, 17th, and 46th Annual Convention and 5th Annual Fire School, Wichita, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan. Secretary, Firemen's Short Course, E. J. Stewart, Kansas Insp. Bureau, 701 Jackson St., Topeka, Kan. Also the Associations will conduct ten one-day regional fire schools in ten different towns—First one in Chanute, Kan., latter part of April.

June 13-15—FIRE CHIEFS' ASSOCIATION OF OHIO. 16th Annual Convention, Mansfield, Ohio. Secretary-Treasurer, Chief Philip J. Harty, Youngstown Sheet & Tube Company, Youngstown, Ohio.

June 14-16—MARYLAND STATE FIREMEN'S ASSOCIATION. 41st Annual Convention, Westminster, Md. Secretary, George R. Lindsay, Hagerstown, Md.

June 20-22—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 11th Annual Convention, Lewiston, Me. Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass.

June 26-29—COLORADO STATE FIREMEN'S ASSOCIATION. 17th Annual Convention, Estes Park, Col. Secretary, Clinton Turnbull, 303 Jacobson Bldg., Denver, Col.

June 28—CENTRAL WESTERN FIREMEN'S ASSOCIATION. Annual Convention, Miamisburg, Ohio. Secretary, A. Hetzel, Miamisburg.

July 1—TEMISKAMING FIREMEN'S ASSOCIATION. Tournament, New Liskeard, Ont., Can. Secretary-Treasurer, F. E. Thompson, New Liskeard, Ont.

July 18-19—MARITIME FIRE CHIEFS' ASSOCIATION. 19th Annual Convention, Digby, N. S., Can. Secretary-Treasurer. Captain Kenneth J. MacRae, Puggsley Bldg., St. John, N. B.

July 24-28—WEST VIRGINIA FIRE SERVICE EXTENSION SCHOOL. 3rd Extension School, University of West Virginia, Morgantown. Secretary, Chief C. J. Powell, Romney, W. Va.

July 24-28—WEST VIRGINIA FIRE CHIEFS' ASSOCIATION. 2nd Annual Meeting, University of West Virginia, Morgantown. Secretary, Chief C. J. Powell, Romney, W. Va.

Aug. 1-3—WISCONSIN PAID FIREMEN'S ASSOCIATION. 26th Annual Convention. Green Bay, Wis. Secretary-Treasurer, William H. Schultz, Sheboygan, Wis.

Aug. 8 to 11—VIRGINIA STATE FIREMEN'S ASSOCIATION. 47th Annual Convention, Harrisonburg, Va. Secretary, O. W. Dabney, Staunton, Va.

Aug. 15-18—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. 61st Annual Convention, Poughkeepsie, N. Y. Secretary, Fred A. Davis, Fort Edward, N. Y.

Aug. 8—STATE FIRE CHIEFS' ASSOCIATION OF VIRGINIA. Annual Convention, Harrisonburg, Va. Secretary-Treasurer, Chief E. H. Rouse, Orange, Va.

Sept.—ARKANSAS STATE FIREMEN'S ASSOCIATION. 12th Annual Convention, Eureka Springs, Ark. (Exact date to be decided later.) Secretary-Treasurer, H. D. Compton, Little Rock, Ark.

Sept.—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 39th Annual Convention, Oklahoma City, Okla. (Exact date to be decided later.) Secretary-Treasurer, Charles Slemp, 820 East 19th St., Oklahoma City.

Sept.—NORTHWEST FIRE SCHOOL. 6th Annual Fire School, exact date not set, but probably in September, as usual. University of Minnesota. Minneapolis. Address, Chief Frank W. Fuller, Brainerd, Minn.

Sept. 5-7—KENTUCKY STATE FIREMEN'S ASSOCIATION. 14th Annual Convention, Pikeville, Ky. Secretary, Capt. S. G. Render, 940 Starks Bldg., Louisville, Ky.

Sept. 18-19—MISSOURI ASSOCIATION OF FIRE FIGHTERS. 9th Annual Convention. Kansas City, Mo. Secretary-Treasurer, M. J. Mulvoy, 405 City Hall Building, St. Louis, Mo.

Sept. 19-20—IOWA FIREMEN'S ASSOCIATION. 56th Annual Convention, Denison, Ia. Secretary, Paul A. Soener, Independence, Ia.

Sept. 21-22—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 13th Annual Convention, Laurel, Del. Secretary, Sam H. Carson, Dover, Del.

Oct. 2—TEMISKAMING FIREMEN'S ASSOCIATION. 10th Annual Convention, New Liskeard, Ont., Can. Secretary-Treasurer, F. E. Thompson, New Liskeard, Ont.

Oct. 3-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. 54th Annual Convention, Lock Haven, Pa. Secretary, Charles E. Clark, Wayne, Pa.

Oct. 17-19—ILLIOIS FIREMEN'S ASSOCIATION. 47th Annual Convention, Rockford, Ill. Secretary, Assist. Chief Roy W. Alsip, Fire Department, Champaign, Ill.

Kellogg, Mine Safety Appliances, Dead

Edward H. Kellogg, for the past six years General Sales Manager of the Mine Safety Appliances Company, died Monday evening, January 9, at his home in Pittsburgh. He became associated with the Mine Safety Appliances Company, December 1, 1919, following the World War where he had served overseas as a Captain in the Chemical Warfare service. At the time of his death, he was a Major in the Officers Reserve Corps, Chemical Warfare Service. Funeral services were held under the auspices of the American Legion at the Moreland Chapel, Pittsburgh, Wednesday evening and burial took place in Arlington National Cemetery, Washington, D. C., on Thursday with full Army rites.

The Late E. H. Kellogg

Mr. Kellogg was born at Russell, Kan., January 29, 1892. He graduated in 1911 from Kansas State College where he specialized in chemistry. At the outbreak of the war, he was stationed for a time in Washington, D. C., in chemical research work, being associated with both the Department of Agriculture and the Bureau of Standards.

He was a member of the American Legion, the American Chemical Society and the American Society of Safety Engineers, National Safety Council.

The deceased is survived by his widow, a son, a brother, and a sister.

Kansas City Firemen Care for Needy

Part of the proceeds derived from the annual ball of the Kansas City, Kan., Fire Department was given for the relief of the unemployed. In addition firemen contributed $800 to the Community Chest.

The Firemen's Charity Fund has been formed to which firemen have contributed over $2,000. Previously the Welfare Department would turn over pleas for aid to the Community Chest. Some time would elapse for investigation and the usual routine, before relief was given. Now that department refers all applications to the Firemen's Charity Fund and a firemen's committee is dispatched immediately to the needy family. If the plea is found to be a worthy one, food, fuel clothes or medical aid is supplied at once. Officers and members of the committees serve without compensation. Every cent of the fund is used for relief of the needy.

Chief Henry W. Breder, Egg Harbor City, founder and President of the Atlantic County Firemen's Association, was re-elected for his eleventh term.

FALSE ALARMS

—Courtesy, Collier's

"I'd like to buy a good map of the city!"

TIME TO TALK

Henry was the clerk up in the Chief's office. One pay day Henry discovered that he had been paid two dollars too much and he was tickled that he had put one over on the city and the Chief. At his next pay day he found that his pay was two dollars short. He immediately went to the Chief and told him of the mistake.

The Chief replied, "Why didn't you tell me about the time you were paid too much?"

"Well, I didn't mind you making one mistake," said Henry, "but when you made two mistakes I thought it was about time I told you about it."

Man criticizes woman for her extravagance, but she never wastes two dollars' worth of shotgun shells in order to get a twenty-cent rabbit.

MORE EMBRACING

Because of the large open space on one side of a fire station, a street orator placed his box, attracted a crowd, and commenced a speech during which he shouted:

"We must get rid of radicalism, socialism, bolshevism, communism and anarchism."

A fireman who was listening from the second floor window shouted:

"And while you're about it, why not throw in rheumatism?"

EXCESS GAS

The gang was telling some real tall stories around the iron bellied stove in the fire station. The conversationalists touched many topics but when it came to automobiles, one of the group said:

"I have a terrible time with my flivver."

"Yeah?"

He continued, "Yeah. Bought a carburetor that saved fifty per cent of the gas; a timer that saved thirty-five per cent; and a set of spark plugs that saved twenty per cent. After I had gone ten miles my gas tank overflowed."

IN DISGUISE

A little boy of the neighborhood established an acquaintance with a man in the fire station. The boy while at play would often stop to talk to his new friend. One day he chanced to see a nondescript dog sleeping on the apparatus floor.

"What kind of a dog is that?" he asked.

"That's a fire dog."

"Gee, he doesn't look much like a fire dog to me. Where's his spots?"

The fireman thought he would have a good laugh. He said, "Nope: that dog is doing detective work for the Fire Marshal. He's in disguise."

Motor vehicles, a recent survey reveals, consume eighty-five per cent of all gasoline produced. The other fifteen per cent, we presume, is what the filling station attendants spill on the ground when filling your tank.

PHENOMENAL

A new member had joined the fire company. At the morning calisthenics, the officer in charge was putting his men through their usual setting-up exercises.

"Lift up your right leg and hold it straight in front of you."

The new member, not used to the routine, held up his left leg. This brought his left leg side by side with his neighbor's right leg. The officer noticed it.

"And who is that galoot," he shouted, "holding up both his legs?"

SECOND IS BEST

The long gruelling hours of the service, plus an inherent love of beer and similar drinks, produced an ill effect on his kidneys. When he called on his family physician, the doctor said:

"The best thing for you to do is to give up smoking, drink nothing but water at your meals, keep no late hours——."

"Just a minute, doctor. What's the next best thing?"

RELIEF MEASURE

A salesman who tried men's patience entered the fire station. He was known because of his frequent calls.

He remarked to the desk man, "I've come to see the Chief."

"Yes, he's been expecting you," answered the man.

"That's good," said the salesman as he handed out a cigar. "But how do you know that he's been expecting me?"

"He's gone out."

An optimist has no money and a pessimist won't lend you any.

SUBSTITUTION

If it were not
For this short verse,
There'd be a joke here
Ten times worse.

—Drawing by "Art" Espey

Interested Civilian: "Goin' to butcher the buck-sheep, Chief?"

Village Chief: "Nope! Takin' him over ta the hose house. That city fireman who was here last Monday told us we oughta have a 'ram' on our fire truck, but danged if I get his idea."

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12 Banners, Trumpets, etc.
13 Battery Jars
14 Battery Zincs for Fire Alarm Batteries
15 Bells, Fire Alarm, Municipal
16 Body Equipments
17 Boxes, Gongs, Reels, Registers, Fire Alarm
18 Brakes, Air
19 Brake Linings
20 Brooms, Fire
21 Building Materials, Fire Retardant
22 Caps, Firemen's
23 Chains, Non-Skid, Fire Apparatus
24 Chassis for Fire Apparatus
25 Chemical Engines and Tanks
26 Chimney Fire Fuses and Compounds
27 City Service Trucks
28 Coats and Suits, Firemen's Quick Hitch
29 Combination Chemical and Hose Cars
30 Cutting and Welding Equipment, Blow Torch
31 Cutting and Welding Equipment, Electric
32 Deluge Sets
33 Door Openers, Fire Station, Automatic
34 Electric Light Plants
35 Extinguishers, Calcium Chloride
36 Extinguishers, Carbon Dioxide
37 Extinguishers, Soda-Acid
38 Extinguishers, Carbon Tetrachloride
39 Extinguishers, Foam
40 Extinguishers, Powder
41 Fire Boat Nozzle Equipment
42 Fire Department Supplies, General
43 Fire Exit Devices, Door Opening
44 Fire Alarm Posts
45 Fire Escapes, Portable
46 Fire Escapes, Rigid
47 First Aid Equipment
48 Flare Lights
49 Flashlights, Hand
50 Flood Lighting Equipment
51 Foam Generating Apparatus
52 Foam Liquid for Extinguishers
53 Gas Masks and Respirators
54 Gas and Smoke Helmets
55 Gas and Smoke Generators
56 Goggles, Firemen's
57 Helmets, Metal, etc.
58 Hose Bridges
59 Hose Carts, Reels and Racks
60 Hose Clamps
61 Hose, Fire
62 Hose, Chemical
63 Hose Holders
64 Hose Jackets
65 Hose Standardization Tools
66 Hydrant Draining Pumps
67 Hydrants, Fire
68 Jacks for Fire Trucks
69 Jacks, Shoring and Prying
70 Ladders, Fire
71 Lightning Arresters
72 Motorcycles, Fire Dept. Equipped
73 Nets, Life
74 Nozzles, Pipes and Miscellaneous Brass Goods
75 Packings, Pump
76 Pads, Pole Hole
77 Paints, Fire Resisting
78 Priming Ether, Motor
79 Pumping Cars, Standard
80 Pumping Cars, Foam
81 Pumps, Fire Apparatus
82 Pumps, Fire Service, Stationary
83 Pumps, Portable for Fire Protection
84 Record Books, Fire
85 Relief Valves
86 Reviving Apparatus, Oxygen
87 Rubber Clothing
88 Salvage Covers
89 Searchlights
90 Shingles, Fire Retardant
91 Shirts, Firemen's Special
92 Sirens, Apparatus and Chiefs' Cars
93 Sliding Poles
94 Soda and Acid Chemicals
95 Spark Plugs, Fire Apparatus and Motorcycles
96 Squad and other Auxiliary Cars
97 Sprinkler Head Shut-Offs
98 Sprinkler Supervisory Service
99 Sprinkler Systems, Automatic, Foam
100 Sprinkler Systems, Automatic Water
101 Steam Fire Engines
102 Syphons, Water
103 Tarpaulins and Fire Blankets
104 Tetrachloride Chemicals
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106 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid
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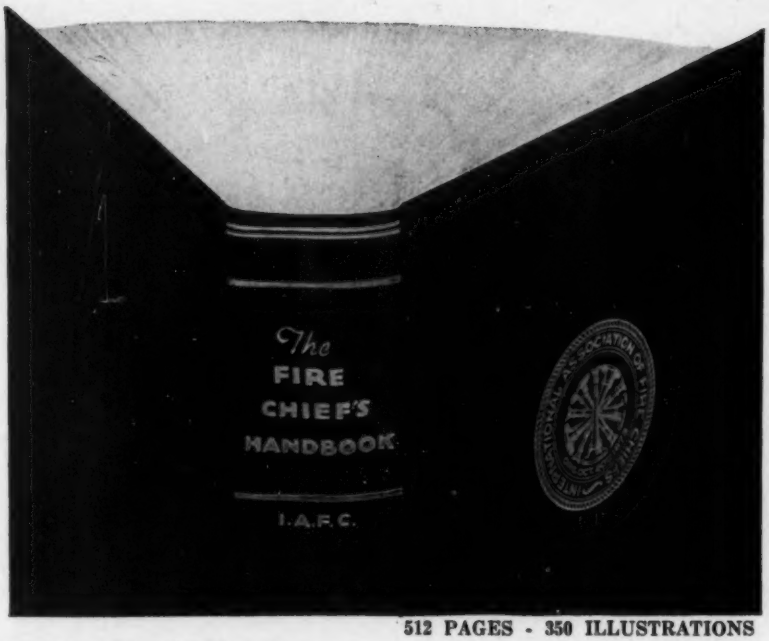

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